



**Robert Oliva Vidal**

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## Summary of CV

This section describes briefly a summary of your career in science, academic and research; the main scientific and technological achievements and goals in your line of research in the medium -and long- term. It also includes other important aspects or peculiarities.

My research career focuses on the fundamental properties of crystalline materials using advanced spectroscopic techniques and first-principles calculations based on density functional theory (DFT), with emphasis on extreme pressure and temperature conditions. This line began with my PhD in Nanoscience (2010–2016), awarded Summa Cum Laude in October 2016, and has continued uninterrupted to the present.

My trajectory has resulted in high-impact scientific and technical contributions. I am author of 39 articles in indexed international journals (1 accepted) listed in ISI-WoK, 12 as first author and 8 as corresponding author (in 6 I am both). All were developed within international collaborations; 33 were published in first-quartile (Q1) journals and 29 are open access. These results have been presented at more than a dozen international conferences, including invited talks (EMN2018, E-MRS 2019, 58th EHPRG), as well as seminars and specialized courses. My h-index is 14 (Scopus ID: 36718016200).

I have conducted knowledge transfer activities with companies such as TopGaN Lasers and ICL Iberia (Iberpotash, S.A.). I am promoter and manager of a scientific-technical service at Geociencias Barcelona (geo3bcn-CSIC), supporting companies and public research institutions, with accumulated revenue of €7,889 since May 2023. I hold intellectual property rights for spectral analysis software (DataPro©), distributed as open source under an MIT license. I also serve as project evaluator for EQA and as reviewer for several international journals.

My leadership capacity has been evident since early career stages. After starting a postdoctoral contract at Wrocław University of Science and Technology (Poland) in July 2017, I obtained competitive funding as Principal Investigator of the Polonez3 project, funded by the Marie Skłodowska-Curie Actions (grant No. 665778), with a 10% success rate and a total budget of 1,844,176 PLN (€196,320 for my team). The project included training in management and leadership and produced high-impact publications and strong international dissemination, including chaired sessions (EMN2018) and membership on the organizing committee of DyProSo2021.

My scientific independence was consolidated after passing a competitive examination at the center where I completed my PhD, joining on 1 September 2022 as Permanent Researcher at Geociencias Barcelona (geo3bcn-CSIC). I became, together with Dr. Agustín Lobo, co-responsible of the Hyperspectral Imaging Laboratory, coordinator of the “Crystal Physics, Mineralogy and High Pressures” team, and scientific co-manager of a CSIC-listed service. I have strengthened my research through intensive use of Spanish Unique Scientific and Technical Infrastructures (ICTS), acting as PI or co-PI in more than a dozen projects across beamlines at the European synchrotrons ALBA Synchrotron, Elettra Sincrotrone Trieste, SOLEIL Synchrotron and European Synchrotron Radiation Facility, with 20 participations in total.

I also supervise undergraduate internships and bachelor’s and master’s theses, and have university teaching experience. I hold positive accreditation as Profesor Ayudante Doctor from ANECA and have participated in more than a dozen outreach activities.

**C****V****n**

CURRÍCULUM VITAE NORMALIZADO

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My scientific, leadership and independence achievements have been enabled by broad international collaboration and mobility. I have undertaken research stays at leading institutions with recognized experts, including the University of Valencia (optical absorption and FTIR), Sorbonne University – formerly Université Pierre et Marie Curie (Brillouin spectroscopy), Wrocław University of Science and Technology (optical photorefectance), the University of Luxembourg (low-temperature Raman), and the University of La Laguna (single-crystal diffraction), all adapted to high-pressure research. Additional collaborations with McGill University (Canada), the Technion – Israel Institute of Technology (Israel), and the University of the Basque Country (EHU, Spain) have enabled impactful publications and dissemination at around twenty international conferences.



## General quality indicators of scientific research

This section describes briefly the main quality indicators of scientific production (periods of research activity, experience in supervising doctoral theses, total citations, articles in journals of the first quartile, H index...). It also includes other important aspects or peculiarities.

My h-index is 14 (source: Scopus). My scientific output comprises 38 publications (39 accepted) in indexed scientific journals. Among the ten most cited publications to date, I am the corresponding author or one of the first three authors in all of them, which is a clear indicator of my leadership capacity and my significant scientific contribution within my research field. Overall, I am first author on 12 publications and corresponding author on 8.

Most of my work (32 publications) has been published in journals ranked in the first quartile (Q1) of their respective fields, and 29 of them are open access. Below are the three most cited articles:

- M.A. Antoniak, S.J. Zelewski, R. Oliva et al. Combined temperature and pressure sensing using luminescent NaBiF<sub>4</sub>:Yb,Er nanoparticles. ACS Applied Nano Materials (2020), 4209–4217. Citations: 100.
- R. Oliva, M. Laurien, F. Dybala et al. Pressure dependence of direct optical transitions in ReS<sub>2</sub> and ReSe<sub>2</sub>. npj 2D Materials and Applications 3 (2019), 20. Corresponding author: R. Oliva. Citations: 54.
- A. Tolloczko, R. Oliva, T. Wozniak et al. Anisotropic optical properties of GeS investigated by optical absorption and photoreflectance. Materials Advances 1 (2020), 1886–1894. Citations: 41.

**Robert Oliva Vidal**

Surname(s): **Oliva Vidal**  
 Name: **Robert**  
 DNI: **47911860P**  
 ORCID: **0000-0002-9378-4048**  
 Date of birth: **26/06/1987**  
 Gender: **Male**  
 Nationality: **Spain**  
 Country of birth: **Canada**  
 Contact province: **Barcelona**  
 City of birth: **Calgary**  
 Contact address: **C/ Lluís Solé i Sabarís S/N**  
 Postcode: **08028**  
 Contact country: **Spain**  
 Contact aut. region/reg.: **Cataluña**  
 Contact city: **Barcelona**  
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**Current professional situation**

**Employing entity:** Consejo Superior de Investigaciones Científicas

**Type of entity:** State agency

**Department:** Geociencias Barcelona (GEO3BCN), Geociencias Barcelona

**Professional category:** Doctor (Personal Laboral Fijo)

**City employing entity:** Spain

**Phone:** 934095410

**Start date:** 01/09/2022

**Type of contract:** Personal Laboral Fijo

**Dedication regime:** Full time

**Primary (UNESCO code):** 221124 - Optical properties; 221125 - Semiconductors; 221191 - Solid state Physics. Spectroscopy of solid

**Identify key words:** Structure on solid state, x rays; Spectroscopy; Semiconductors

**Previous positions and activities**

	<b>Employing entity</b>	<b>Professional category</b>	<b>Start date</b>
<b>1</b>	Seguridad Social	Nacimiento y cuidado de menor (paternidad, 5 meses)	07/08/2024
<b>2</b>	University of Luxembourg	Research associate (24 meses)	01/09/2020
<b>3</b>	Wroclaw University of Science and Technology - Opus11	Lecturer	01/12/2019
<b>4</b>	Narodowe Centrum Nauki - HORIZON 2020 - Marie Skłodowska-Curie actions.	Assistant professor (24 meses)	01/12/2017



	<b>Employing entity</b>	<b>Professional category</b>	<b>Start date</b>
5	Wroclaw University of Science and Technology - Opus11	Lecturer (4 meses)	01/07/2017
6	Ministerio de Economía, Industria y Competitividad - FPI	Doctorando (48 meses)	01/01/2012
7	Ministerio de Economía, Industria y Competitividad - FPI	Doctorando (24 meses)	01/01/2014
8	Ministerio de Economía, Industria y Competitividad - FPI	Doctorando (24 meses)	01/01/2012
9	Ministerio de economía, industria y competitividad	Investigador contratado	18/09/2011
10	Ministerio de economía, industria y competitividad	Investigador contratado	18/04/2011
11	Ministerio de industria, economía y competitividad	Investigador contratado (21 meses)	01/10/2010
12	Ministerio de industria, economía y competitividad	Investigador contratado	13/01/2010

- 1** **Employing entity:** Seguridad Social  
**Professional category:** Nacimiento y cuidado de menor (paternidad, 5 meses)  
**Start-End date:** 07/08/2024 - 20/06/2025      **Duration:** 5 months
- 2** **Employing entity:** University of Luxembourg      **Type of entity:** University  
**Professional category:** Research associate (24 meses)  
**Start-End date:** 01/09/2020 - 31/08/2022      **Duration:** 2 years  
**Type of contract:** Temporary employment contract
- 3** **Employing entity:** Wroclaw University of Science and Technology - Opus11  
**Professional category:** Lecturer      **Leadership and management (Y/N):** No  
**Start-End date:** 01/12/2019 - 31/08/2020      **Duration:** 5 months  
**Type of contract:** Grant-assisted student (pre or post-doctoral, others)  
**Area of leadership and/or management activity:** General State Administration
- 4** **Employing entity:** Narodowe Centrum Nauki - HORIZON 2020 - Marie Sklodowska-Curie actions.  
**Professional category:** Assistant professor (24 meses)  
**Start-End date:** 01/12/2017 - 30/12/2019      **Duration:** 2 years
- 5** **Employing entity:** Wroclaw University of Science and Technology - Opus11  
**Professional category:** Lecturer (4 meses)      **Leadership and management (Y/N):** No  
**Start-End date:** 01/07/2017 - 30/11/2017      **Duration:** 5 months  
**Type of contract:** Grant-assisted student (pre or post-doctoral, others)  
**Area of leadership and/or management activity:** General State Administration
- 6** **Employing entity:** Ministerio de Economía, Industria y Competitividad - FPI  
**Professional category:** Doctorando (48 meses)  
**Start-End date:** 01/01/2012 - 31/12/2016      **Duration:** 4 years  
**Type of contract:** Grant-assisted student (pre or post-doctoral, others)  
**Dedication regime:** Full time



- 7** **Employing entity:** Ministerio de Economía, Industria y Competitividad - FPI  
**Department:** Crystallography and Optical Properties, Insitute of Earth Sciences Terra Jaume Almera  
**Professional category:** Doctorando (24 meses)  
**Start-End date:** 01/01/2014 - 01/01/2016 **Duration:** 2 years  
**Type of contract:** contrato predoctoral  
**Dedication regime:** Full time
- 8** **Employing entity:** Ministerio de Economía, Industria y Competitividad - FPI  
**Department:** Crystallography and Optical Properties, Insitute of Earth Sciences Terra Jaume Almera  
**Professional category:** Doctorando (24 meses)  
**Start-End date:** 01/01/2012 - 31/12/2013 **Duration:** 2 years  
**Type of contract:** beca predoctoral  
**Dedication regime:** Full time
- 9** **Employing entity:** Ministerio de economía, industria y competitividad **Type of entity:** State agency  
**Professional category:** Investigador contratado  
**Start-End date:** 18/09/2011 - 31/10/2011 **Duration:** 1 month - 13 days
- 10** **Employing entity:** Ministerio de economía, industria y competitividad **Type of entity:** State agency  
**Professional category:** Investigador contratado  
**Start-End date:** 18/04/2011 - 17/09/2011 **Duration:** 4 months - 28 days
- 11** **Employing entity:** Ministerio de industria, economía y competitividad **Type of entity:** State agency  
**Professional category:** Investigador contratado (21 meses)  
**Start-End date:** 01/10/2010 - 31/03/2011 **Duration:** 6 months
- 12** **Employing entity:** Ministerio de industria, economía y competitividad **Type of entity:** State agency  
**Professional category:** Investigador contratado  
**Start-End date:** 13/01/2010 - 30/09/2010 **Duration:** 8 months - 20 days

## Summary of professional activity

My professional activity can be summarized in four stages of continuous research:

- 1- The predoctoral stage, prior to 01/01/2016, consisted of employment periods under different research projects, as well as a 48-month FPI fellowship to carry out my doctoral studies.
- 2- My first postdoctoral stage at Wrocław University of Science and Technology (Poland), lasting three years (01/07/2017–31/08/2020), consisted of two contracts under different research projects, as well as a 24-month individual project (Polonez).
- 3- The second postdoctoral stage at the University of Luxembourg (Luxembourg), lasting two years (01/09/2020–31/08/2022), consisted of two contracts under a scientific project.
- 4- Appointment to a permanent position (category “Doctor”) at Geociencias Barcelona (geo3bcn-CSIC), with a start date of 01/09/2022.



## Education

### University education

#### 1st and 2nd cycle studies and pre-Bologna degrees

- 1 **University degree:** Higher degree  
**Name of qualification:** Máster Universitario en Formación de Profesorado de Educación Secundaria  
**Degree awarding entity:** Universidad de La Rioja    **Type of entity:** University  
**Date of qualification:** 24/02/2017
- 2 **University degree:** Higher degree  
**Name of qualification:** Máster en Nanociencia y Nanotecnología  
**Degree awarding entity:** Universitat de Barcelona    **Type of entity:** University  
**Date of qualification:** 10/09/2010
- 3 **University degree:** Higher degree  
**Name of qualification:** Licenciado en Física  
**Degree awarding entity:** Universitat de Barcelona    **Type of entity:** University  
**Date of qualification:** 23/09/2009

#### Doctorates

**Doctorate programme:** Programa Oficial de Doctorado en Nanociencias  
**Degree awarding entity:** Universitat de Barcelona    **Type of entity:** University  
**Date of degree:** 27/10/2016  
**European doctorate:** Yes  
**Thesis title:** High-pressure optical and vibrational properties of InN and InGaN  
**Thesis director:** Jordi Ibáñez Insa  
**Obtained qualification:** Excellent "CUM LAUDE"  
**Recognition of quality:** Yes  
**Standardised degree:** Yes

#### Attended advanced, improvement and innovative teacher training and new technology courses and seminars focused on improving teaching

- 1 **Title of course/seminar:** Working With Others  
**Goals of the course/seminar:** Objectives of the "Working with Others" seminar (teaching-focused): - Improve communication with students and colleagues - Strengthen collaborative and team-teaching skills - Enhance student engagement and classroom interaction - Develop constructive conflict management in teaching contexts - Adapt teaching to diverse learning styles and backgrounds These objectives support effective, inclusive, and high-quality teaching practice.  
**Organising entity:** Vitae POLONEZ Training    **Type of entity:** Associations and Groups  
Programme - National Science Centre  
**Faculty, institute or centre:** National Science Centre (NCN) Poland



**Duration in hours:** 15 hours

**Start-End date:** 26/06/2019 - 26/06/2019

**2 Title of course/seminar:** Communication workshop

**Goals of the course/seminar:** Integrity, Self-reflection, Responsiveness to opportunities, Reputation and esteem, Income and funding generation, Communication methods, Communication media, Public engagement, Project preparation and Transfer of knowledge

**City organizing entity:** Warsaw, Poland

**Organising entity:** Vitae POLONEZ Training Programme - National Science Centre

**Type of entity:** Associations and Groups

**Duration in hours:** 15 hours

**Start-End date:** 06/10/2018 - 07/10/2018

**Funding programme:** Polonez3 project

## Language skills

Language	Listening skills	Reading skills	Spoken interaction	Speaking skills	Writing skills
English	C1	C1	C1	C1	C1
Catalan	C2	C2	C2	C2	C2
Spanish	C2	C2	C2	C2	C2

## Teaching experience

### General teaching experience

**1 Name of the course:** Surface Science and Analysis

**University degree:** Master de Nanociencia y Nanotecnología

**Start date:** 31/10/2025

**End date:** 31/10/2025

**Type of hours/ ECTS credits:** Credits

**Hours/ECTS credits:** 4

**Entity:** Universitat de Barcelona

**Type of entity:** University

**Faculty, institute or centre:** Facultat de Física

**2 Name of the course:** Surface Science and Analysis

**University degree:** Master de Nanociencia y Nanotecnología

**Start date:** 24/10/2025

**End date:** 24/10/2025

**Type of hours/ ECTS credits:** Credits

**Hours/ECTS credits:** 4

**Entity:** Universitat de Barcelona

**Type of entity:** University

**Faculty, institute or centre:** Facultat de Física

**3 Name of the course:** Surface Science and Analysis

**University degree:** Master de Nanociencia y Nanotecnología

**Start date:** 18/10/2024

**End date:** 18/10/2024

**Type of hours/ ECTS credits:** Credits

**Hours/ECTS credits:** 4

**Entity:** Universitat de Barcelona

**Type of entity:** University



**Faculty, institute or centre:** Facultat de Física

**4 Name of the course:** Surface Science and Analysis

**University degree:** Master de Nanociencia y Nanotecnología

**Start date:** 15/11/2023

**End date:** 15/11/2023

**Type of hours/ ECTS credits:** Credits

**Hours/ECTS credits:** 4

**Entity:** Universitat de Barcelona

**Type of entity:** University

**Faculty, institute or centre:** Facultat de Física

**5 Type of teaching:** Official teaching

**Name of the course:** Physics

**Type of programme:** Engineering

**Type of subject:** Optional

**University degree:** Mechanical Engineering

**Start date:** 21/02/2018

**End date:** 13/06/2018

**Type of hours/ ECTS credits:** Hours

**Hours/ECTS credits:** 26

**Entity:** Wroclaw University of Science and Technology

**City of entity:** Wroclaw, Poland

**6 Type of teaching:** Official teaching

**Name of the course:** Physics 3.1

**Type of programme:** Engineering

**University degree:** Informatics and management

**Start date:** 27/02/2018

**End date:** 24/04/2018

**Type of hours/ ECTS credits:** Hours

**Hours/ECTS credits:** 12

**Entity:** Wroclaw University of Science and Technology

**City of entity:** Wroclaw, Poland

**7 Type of teaching:** Official teaching

**Name of the course:** Physics

**Type of programme:** Engineering

**Type of subject:** Optional

**University degree:** Electronic Engineering

**Course given:** Física

**Start date:** 24/10/2017

**End date:** 12/12/2017

**Type of hours/ ECTS credits:** Hours

**Hours/ECTS credits:** 13

**Entity:** Wroclaw University of Science and Technology

**City of entity:** Wroclaw, Poland

**Subject language:** English

## Experience supervising doctoral thesis and/or final year projects

- 1** **Project title:** Espectroscòpia Raman a altes pressions per a estudiar l'interior dels planetes gegants  
**Type of project:** Bachelor's Thesis  
**Co-director of thesis:** Jordi Ibañez Insa; Robert Oliva Vidal  
**Entity:** Universitat Autònoma de Barcelona **Type of entity:** University  
**Student:** Adrián León Colmenero  
**Date of reading:** 23/06/2026  
**Narrative Explanation:** En proceso de realización.
- 2** **Project title:** Pràctiques en empresa I -120 horas-  
**Type of project:** Tutorización de practica de empresa Grado de Geologia, 150 horas  
**Entity:** Universitat de Barcelona **Type of entity:** University  
**City of entity:** Barcelona, Catalunya, Spain  
**Student:** Arnau Miñana Matamales  
**Date of reading:** 30/05/2025
- 3** **Project title:** Structural and optical properties of TEA<sub>2</sub>SnI<sub>4</sub> under temperature and high-pressure conditions  
**Type of project:** Master's Thesis  
**Co-director of thesis:** Robert Oliva; Sergi Hernández  
**Entity:** Universitat de Barcelona **Type of entity:** University  
**City of entity:** Barcelona, Spain  
**Student:** Joan Carrión Ramos  
**Date of reading:** 03/10/2024  
**Date of award:** 03/10/2024
- 4** **Project title:** Pràctiques en empresa I -150 horas-  
**Type of project:** Tutorización de practica de empresa Grado de Geologia, 150 horas  
**Entity:** Universitat de Barcelona **Type of entity:** University  
**City of entity:** Barcelona, Catalunya, Spain  
**Student:** Laura Martí Líndez  
**Date of reading:** 21/06/2024
- 5** **Project title:** Miembro de tribunal titular y suplente de tesis doctoral. Título de la tesis: Algorithms for light applications: from theoretical simulations to prototyping  
**Type of project:** Miembro Tribunal  
**Co-director of thesis:** Sergi Hernández Márquez; Blas Garrido Fernández  
**Entity:** Universitat de Barcelona **Type of entity:** University  
**City of entity:** Barcelona, Catalunya, Spain  
**Student:** Adrià Huguet Ferran  
**Date of reading:** 20/01/2023
- 6** **Project title:** Evaluador externo de tesis doctoral. Título de la tesis: Estudio de compuestos As<sub>2</sub>X<sub>3</sub> bajo presión  
**Type of project:** PhD thesis external evaluation for defense  
**Co-director of thesis:** Francisco Javier Manjón Herrera; Juan Ángel Sans Tresserras  
**Entity:** Universitat Politècnica de Valencia **Type of entity:** University  
**City of entity:** Valencia, Comunitat Valenciana, Spain  
**Student:** Vanesa Paula Cuenca Gotor  
**Date of reading:** 17/06/2019



## Courses and seminars given

- 1 Type of event:** Course  
**Name of the event:** Grado en Enseñanzas Artísticas Superiores de Conservación y Restauración de Bienes Culturales  
**Organising entity:** Escuela Superior de Conservación y Restauración de Bienes Culturales de Cataluña  
**Type of entity:** University  
**Aims of the course:** Título del curso "Técnicas analíticas instrumentales y de laboratorio - I"  
**Hours of teaching:** 2,5  
**Teaching date:** 11/12/2025
- 2 Type of event:** Course  
**Name of the event:** Escuela Española de Altas Presiones - Asignatura "High pressure optical properties of semiconductor materials"  
**Organising entity:** Universidad de Cantabria  
**Type of entity:** University  
**Teaching date:** 05/07/2024
- 3 Type of event:** Course  
**Name of the event:** Escuela Española de Altas Presiones - Asignatura "Espectroscopías Ópticas"  
**Organising entity:** Universitat Politècnica de València  
**Type of entity:** University  
**Teaching date:** 30/08/2021

## Other activities/achievements not included above

- 1 Description of the activity:** Acreditación Positiva como "Profesor Ayudante Doctor" por parte de la ANECA  
**Organising entity:** Agencia Nacional de Evaluación de la Calidad y Acreditación  
**Type of entity:** Organismo público  
**End date:** 18/03/2023
- 2 Description of the activity:** Contratado profesor. Asignaturas de matemáticas y ciencias naturales (duración 6 meses)  
**City of activity:** Barcelona, Cataluña, Spain  
**Organising entity:** Institucio Pedagogica Sant Isidor (IPSI)  
**End date:** 25/06/2017



## Scientific and technological experience

### Research and development groups/teams

**Name of the group:** Crystal physics, mineralogy and high pressure - Research team (geo3bcn-CSIC)

**Name of principal investigator:** Robert Oliva

**Number of members in the group:** 3

**Type of collaboration:** Co-authorship of publications

**City of group:** Barcelona, Spain

**Affiliation entity:** Instituto de Ciencias de la Tierra  
Jaume Almera

**Type of entity:** State agency

**Narrative explanation:** Este equipo de trabajo tiene por objetivo dar respuesta a los tres retos establecidos en geo3bcn, estos son: Geodinámica, Georriesgos y Cambio global y Georecursos. A tal efecto los objetivos específicos son: - Estudio de propiedades fundamentales (vibracionales, ópticas, estructurales) de los sólidos cristalinos en condiciones ambientales - Estudio de propiedades fundamentales (vibracionales, ópticas, estructurales) de los sólidos cristalinos a altas presiones hidrostáticas mediante la técnica de la celda de yunque de diamante - Caracterización de materiales y geomateriales mediante diferentes técnicas analíticas (espectroscopía Raman, difracción de rayos X, técnicas ópticas e hiperespectrales, fluorescencia de rayos X)

**Start date:** 21/06/2023

**Duration:** 3 years

### Scientific or technological activities

#### R&D projects funded through competitive calls of public or private entities

- 1 Name of the project:** 20250370105 - Structural stabilities of titanium alloys under extreme conditions

**Entity where project took place:** ALBA synchrotron

**Name principal investigator (PI, Co-PI...):** Daniel Errandonea; Robin Turnbull; Robert Oliva; Pablo Botella Vives; Simon MacLeod

**Nº of researchers:** 5

**Type of participation:** Team member

**Start-End date:** 11/02/2026 - 17/02/2026

**Duration:** 6 days
- 2 Name of the project:** Propiedades físico-químicas de asteroides y cometas a partir del estudio en el laboratorio de meteoritos y muestras retornadas de asteroides (PHYSMASTER)

**Entity where project took place:** Geociencias Barcelona (geo3bcn-CSIC), Instituto de Ciencias del Espacio - CSIC

**Name principal investigator (PI, Co-PI...):** Josep Maria Trigo; Jordi Ibañez; Robert Oliva; Vicent Martinez

**Start-End date:** 01/09/2022 - 31/08/2025

**Total amount:** 190.454 €

**Applicant's contribution:** Investigador a dedicación completa
- 3 Name of the project:** 2024028156 - Assessing the anomalous electronic structure and high-pressure crystal structure of the highly distorted perovskite solid solution  $\text{SeNi}_{1-x}\text{Co}_x\text{O}_3$

**Entity where project took place:** ALBA synchrotron

**Name principal investigator (PI, Co-PI...):** Joao Elias Figueiredo; Romualdo Santos Silva; Robert Oliva; Jordi Ibañez; Pau Grèbol-Tomás; Josep Roque

**Nº of researchers:** 6

**Type of participation:** Team member



**Start-End date:** 19/09/2024 - 24/09/2024

- 4** **Name of the project:** 2023087668 - Pressure-induced structural transformations of hybrid tin halide perovskites  
**Entity where project took place:** ALBA synchrotron  
**Name principal investigator (PI, Co-PI....):** Daniel Errandonea; Pablo Botella; Robin Turnbull; Robert Oliva  
**N° of researchers:** 4  
**Type of participation:** Team member  
**Start-End date:** 18/04/2024 - 23/04/2024
- 5** **Name of the project:** 2023027486 - High-pressure structural properties of two-dimensional transition metal phosphorus trichalcogenides  
**Entity where project took place:** ALBA synchrotron  
**Name principal investigator (PI, Co-PI....):** Robert Oliva; Daniel Errandonea; Jordi Ibáñez; Catalin Popescu  
**N° of researchers:** 4  
**Type of participation:** Principal investigator  
**Start-End date:** 17/10/2023 - 19/10/2023
- 6** **Name of the project:** 2022085940 - High pressure behavior of bimetallic stannates  
**Entity where project took place:** ALBA synchrotron  
**Name principal investigator (PI, Co-PI....):** Daniel Díaz; Josu Sánchez-Martín; Simone Anzellini; Jordi Ibáñez; Robert Oliva; Robin Turnbull  
**N° of researchers:** 6  
**Type of participation:** Team member  
**Start-End date:** 24/04/2023 - 28/04/2023
- 7** **Name of the project:** 2022025712 - Polymorphism of dense alkaline carbonates  
**Entity where project took place:** ALBA synchrotron  
**Name principal investigator (PI, Co-PI....):** David Santamaria-Perez; Alberto Otero de la Roza; Robert Oliva  
**N° of researchers:** 3  
**Start-End date:** 27/10/2022 - 01/11/2022
- 8** **Name of the project:** 2022025734 - High-pressure behavior and stability of the fluorite-related oxides zirconolite (CaZrTi<sub>2</sub>O<sub>7</sub>) and calzirtite (Ca<sub>2</sub>Zr<sub>5</sub>Ti<sub>2</sub>O<sub>16</sub>) for nuclear waste storage applications  
**Entity where project took place:** ALBA synchrotron  
**Name principal investigator (PI, Co-PI....):** Josu Sánchez-Martín; Jordi Ibáñez; Robert Oliva; Robin Turnbull  
**N° of researchers:** 4  
**Start-End date:** 28/09/2022 - 01/10/2022
- 9** **Name of the project:** 20210259 - A direct insight into ferroelectricity under pressure  
**Entity where project took place:** SOLEIL synchrotron, beamline: AILES  
**City of entity:** France  
**Name principal investigator (PI, Co-PI....):** Mael Guennou; Robert Oliva; Marine Verseils; Constance Toulouse  
**N° of researchers:** 4  
**Type of participation:** Team member  
**Start-End date:** 02/08/2022 - 07/08/2022  
**Relevant results:** AILES-B-Medium resolution interferometer, 15 shifts of 8h, 120h total beamtime.



- 10** **Name of the project:** 2021095390 - High-pressure X-ray diffraction as a probe of shock-induced metamorphization effects on meteorite minerals  
**Entity where project took place:** ALBA synchrotron  
**Name principal investigator (PI, Co-PI....):** Eloy Peña-Asensio; Josep Maria Trigo-Rodríguez; Josu Sánchez-Martín; Akun Liang; Jordi Ibáñez; Robert Oliva  
**Nº of researchers:** 6  
**Start-End date:** 05/05/2022 - 10/05/2022
- 11** **Name of the project:** 20191842 - High pressure structural properties of BaZrO<sub>3</sub>, single crystal measurements.  
**Entity where project took place:** SOLEIL synchrotron, beamline: CRISTAL  
**City of entity:** France  
**Name principal investigator (PI, Co-PI....):** Mael Guennou; Robert Oliva; Constance Toulouse; Pierre Bouvier  
**Nº of researchers:** 4  
**Type of participation:** Team member  
**Start-End date:** 09/04/2021 - 09/04/2021
- 12** **Name of the project:** Modulation spectroscopy of van der Waals and two-dimensional systems. OPUS10 (2015/19/B/ST7/02163)  
**Entity where project took place:** Wroclaw University of Science and Technology  
**City of entity:** Poland  
**Name principal investigator (PI, Co-PI....):** Mariusz Rudziński; Robert Kudrawiec; Robert Oliva  
**Nº of researchers:** 3  
**Type of participation:** Team member  
**Start-End date:** 07/07/2016 - 06/01/2020  
**Total amount:** 242.500 €
- 13** **Name of the project:** Polonez3 "High-pressure optoelectronic and vibrational properties of transition metal dichalcogenides" (2016/23/P/ST3/04278)  
**Entity where project took place:** Wroclaw University of Science and Technology  
**City of entity:** Wroclaw, Poland  
**Name principal investigator (PI, Co-PI....):** Robert Oliva Vidal; Robert Kudrawiec; Marta Gladysiewicz  
**Nº of researchers:** 3 **Nª people/year:** 3  
**Type of participation:** Principal investigator  
**Name of the programme:** Polonez3 - Marie Sklodowska-Curie grant agreement No 665778  
**Start-End date:** 01/12/2017 - 30/11/2019 **Duration:** 2 years  
**Total amount:** 196.320 €  
**Dedication regime:** Full time
- 14** **Name of the project:** 2019023539 - High-pressure structural properties of transition metal dichalcogenides  
**Entity where project took place:** ALBA synchrotron  
**Name principal investigator (PI, Co-PI....):** Robert Oliva; Jordi Ibáñez; Catalin Popescu  
**Nº of researchers:** 3  
**Type of participation:** Co-ordinator  
**Start-End date:** 21/06/2019 - 30/06/2019
- 15** **Name of the project:** 2018052867 - Helium reactivity under extreme conditions  
**Entity where project took place:** ALBA synchrotron  
**Name principal investigator (PI, Co-PI....):** Juan Angel Sans-Tresserras; Jordi Ibáñez; Catalin Popescu; Robert Oliva  
**Nº of researchers:** 4



**Type of participation:** Team member

**Start-End date:** 24/09/2018 - 27/09/2018

- 16 Name of the project:** 2014071040 - Thallium-based III-V-VI<sub>2</sub> ternary chalcogenides as pressure-induced topological insulators  
**Entity where project took place:** ALBA synchrotron  
**Name principal investigator (PI, Co-PI....):** Jordi Ibáñez; Esther Alarcon Llado; Julià Lopez Vidrier; Robert Oliva; Sergi Hernandez; C. A. Popescu  
**Nº of researchers:** 6  
**Start-End date:** 12/02/2015 - 14/02/2015
- 17 Name of the project:** Propiedades Opticas de Materiales Optoelectronicos y Fotovoltaicos. Ref. MAT2010-16116  
**Entity where project took place:** Instituto de Ciencias de la Tierra Jaume Almera  
**Type of entity:** State agency  
**City of entity:** Barcelona, Cataluña, Spain  
**Name principal investigator (PI, Co-PI....):** Lluís Artus Surroca  
**Nº of researchers:** 8  
**Start-End date:** 18/04/2011 - 31/12/2014  
**Total amount:** 181.500 €  
**Applicant's contribution:** Función: Investigador
- 18 Name of the project:** 2013110829 - High-pressure X-ray diffraction of high-quality Si/SiO<sub>2</sub> nanocrystals  
**Entity where project took place:** ALBA synchrotron  
**Name principal investigator (PI, Co-PI....):** Jordi Ibáñez; Robert Oliva; Julià Lopez-Vidrier; José Joaquín Elvira Betanzos; Sergi Hernández; Juan Angel Sans Tresserras; Catalin Popescu  
**Nº of researchers:** 7  
**Start-End date:** 13/06/2014 - 15/06/2014
- 19 Name of the project:** HC/6397 - Unveiling the High Pressure and Temperature behavior of superionic conducting materials  
**Entity where project took place:** ESRF synchrotron  
**Name principal investigator (PI, Co-PI....):** Daniel Errandonea; Robert Oliva; Pablo Botella; Robin Turnbull  
**Nº of researchers:** 4  
**Type of participation:** Team member  
**Start date:** 27/02/2026
- 20 Name of the project:** 20235174 - High-pressure structural properties of two-dimensional transition metal phosphorus trichalcogenides  
**Entity where project took place:** Elettra synchrotron  
**Name principal investigator (PI, Co-PI....):** Robert Oliva; Jan Kopaczek; Frederico Alabarse; Jordi Ibañez; Beatriz de Simoni  
**Nº of researchers:** 5  
**Type of participation:** Principal investigator  
**Start date:** 15/05/2024
- 21 Name of the project:** 20230054 - 2D layered group-III B<sub>2</sub>X<sub>3</sub> sesquichalcogenides under high-pressure conditions  
**Entity where project took place:** Elettra synchrotron  
**Name principal investigator (PI, Co-PI....):** Simone Anzellini; Francisco Javier Manjon; Jordi Ibáñez Insa; Robert Oliva Vidal; Pablo Botella; Enrico Bandiello; Daniel Diaz Anichtchenko; Simone Anzellini  
**Nº of researchers:** 8



**Type of participation:** Team member  
**Start date:** 27/10/2023

- 22 Name of the project:** 20225011 - High-pressure behaviour of organolead bromide perovskite,  $\text{CH}_3\text{NH}_3\text{PbBr}_3$   
**Entity where project took place:** Elettra synchrotron  
**Name principal investigator (PI, Co-PI....):** Daniel Errandonea; Akun Liang; Oscar Gomis; Robin Turnbull; Javier Gonzalez-Platas; Robert Oliva Vidal; Pablo Botella  
**Nº of researchers:** 7  
**Type of participation:** Team member  
**Start date:** 30/06/2023
- 23 Name of the project:** Investigation of perovskites by means of high-pressure vibrational and structural techniques (R-STR-1122-00-B)  
**Entity where project took place:** University of Luxembourg  
**City of entity:** Esch-sur-Alzette, Luxembourg  
**Name principal investigator (PI, Co-PI....):** Jens Kreisel; Mael Guenou; Robert Oliva  
**Nº of researchers:** 3  
**Type of participation:** Investigador a jornada completa  
**Start date:** 01/09/2020  
**Dedication regime:** Full time
- 24 Name of the project:** 2013110699 - High-pressure phases and equation of state of  $\text{As}_2\text{S}_3$  and  $\text{Sb}_2\text{S}_3$  sesquisulfides  
**Entity where project took place:** ALBA synchrotron  
**Name principal investigator (PI, Co-PI....):** Juan Angel Sans; Robert Oliva; Jordi Ibáñez; Catalin Popescu  
**Nº of researchers:** 4  
**Start date:** 2014
- 25 Name of the project:** 2012100494 - Structural properties of high-quality Si nanocrystals at high hydrostatic pressures: finite-size effects  
**Entity where project took place:** ALBA synchrotron  
**Name principal investigator (PI, Co-PI....):** Jordi Ibáñez; Robert Oliva; Julià López; Catalin Popescu  
**Nº of researchers:** 4  
**Start date:** 2013
- 26 Name of the project:** 2012010114 - Structural properties of high-quality Si nanocrystals at high hydrostatic pressures: finite-size effects  
**Entity where project took place:** ALBA synchrotron  
**Name principal investigator (PI, Co-PI....):** Jordi Ibáñez; Robert Oliva; Catalin Popescu  
**Nº of researchers:** 3  
**Start date:** 2012
- 27 Name of the project:** Propiedades ópticas de semiconductores de gap ancho (Ref. MAT2007-63617)  
**Entity where project took place:** Instituto de Ciencias de la Tierra Jaume Almera  
**Type of entity:** State agency  
**Name principal investigator (PI, Co-PI....):** Lluís Artús; Ramon Cusco; Jordi Ibáñez  
**Nº of researchers:** 3  
**Start date:** 13/01/2010  
**Total amount:** 240.790 €  
**Applicant's contribution:** Función: Doctorando.



- 28 Name of the project:** Formación de Personal Investigador (FPI-MICINN)  
**Entity where project took place:** Instituto de Ciencias de la Tierra Jaume Almera **Type of entity:** State agency  
**Name principal investigator (PI, Co-PI...):** Robert Oliva  
**Nº of researchers:** 1  
**Start date:** 01/01/2010 **Duration:** 4 years  
**Total amount:** 68.154,16 €  
**Dedication regime:** Full time

## R&D non-competitive contracts, agreements or projects with public or private entities

- 1 Name of the project:** servicio Hiperespectral (Código cuenta interna CSIC: 026FUN)  
**Identify key words:** Surface spectroscopy  
**Type of project:** Basic research (including archaeological digs, etc) **Entity where project took place:** Geociencias Barcelona (geo3bcn-CSIC)  
**Degree of contribution:** Scientific coordinator  
**Type of entity:** State agency  
**City of entity:** Barcelona, Cataluña, Spain  
**Name principal investigator (PI, Co-PI...):** Robert Oliva Vidal; Agustí Lobo; Jordi Ibáñez Insa  
**Nº of researchers:** 3  
**Participating entity/entities:** Instituto de Ciencias de la Tierra Jaume Almera  
**Start date:** 03/11/2025 **Duration:** 1 day  
**Total amount:** 507,12 €  
**Narrative explanation:** Medida muestras de laboratorio mediante técnicas de espectroradiometría.
- 2 Name of the project:** servicio Hiperespectral (Código cuenta interna CSIC: 026FUN) - Instituto Pirenaico de Ecología  
**Identify key words:** Surface spectroscopy  
**Type of project:** Basic research (including archaeological digs, etc) **Entity where project took place:** Geociencias Barcelona (geo3bcn-CSIC)  
**Degree of contribution:** Scientific coordinator  
**Type of entity:** State agency  
**City of entity:** Barcelona, Cataluña, Spain  
**Name principal investigator (PI, Co-PI...):** Robert Oliva; Agustí Lobo; Blas Valero Garcés  
**Nº of researchers:** 3  
**Participating entity/entities:** Instituto Pirenaico de Ecología  
**Start date:** 28/10/2025 **Duration:** 4 days  
**Total amount:** 3.892,03 €  
**Narrative explanation:** Adquisición de 157 imágenes hiperespectrales de testigos de sondeos lacustres en rango visible e infrarojo cercano.
- 3 Name of the project:** servicio Hiperespectral (Código cuenta interna CSIC: 026FUN)  
**Identify key words:** Surface spectroscopy  
**Type of project:** Basic research (including archaeological digs, etc) **Entity where project took place:** Geociencias Barcelona (geo3bcn-CSIC)  
**Degree of contribution:** Scientific coordinator  
**Type of entity:** State agency  
**City of entity:** Barcelona, Cataluña, Spain  
**Name principal investigator (PI, Co-PI...):** Robert Oliva; Agustí Lobo; F. C. Conesa  
**Nº of researchers:** 3



**Participating entity/entities:** Instituto de Productos Naturales y Agrobiología

**Start date:** 10/10/2025

**Duration:** 1 day

**Total amount:** 793,28 €

**Narrative explanation:** Adquisición de imágenes de arqueosoles con cámara hiperespectral FX17 en rango infrarojo.

**4 Name of the project:** servicio Hiperespectral (Código cuenta interna CSIC: 026FUN)

**Identify key words:** Surface spectroscopy

**Type of project:** Basic research (including archaeological digs, etc)

**Entity where project took place:** Geociencias Barcelona (geo3bcn-CSIC)

**Degree of contribution:** Scientific coordinator

**Type of entity:** State agency

**City of entity:** Barcelona, Cataluña, Spain

**Name principal investigator (PI, Co-PI....):** Robert Oliva; Agustí Lobo; F. C. Conesa

**Nº of researchers:** 3

**Participating entity/entities:** Instituto de Productos Naturales y Agrobiología

**Start date:** 08/10/2025

**Duration:** 1 day

**Total amount:** 49,58 €

**Narrative explanation:** Dos escaneos FX17 con dos muestras por escaneo, rango 900-1700nm.

**5 Name of the project:** servicio Hiperespectral (Código cuenta interna CSIC: 026FUN)

**Identify key words:** Surface spectroscopy

**Type of project:** Basic research (including archaeological digs, etc)

**Entity where project took place:** Geociencias Barcelona (geo3bcn-CSIC)

**Degree of contribution:** Scientific coordinator

**Type of entity:** State agency

**City of entity:** Barcelona, Cataluña, Spain

**Name principal investigator (PI, Co-PI....):** Robert Oliva; José Luis Sebastián Ávila

**Nº of researchers:** 2

**Participating entity/entities:** INSTITUTO DE MICROELECTRONICA DE BARCELONA

**Start date:** 12/12/2024

**Duration:** 1 day

**Total amount:** 24,84 €

**Narrative explanation:** Medida muestra suelo viña para evaluación concentración de sulfatos de cobre.

**6 Name of the project:** servicio Hiperespectral (Código cuenta interna CSIC: 026FUN)

**Identify key words:** Surface spectroscopy

**Type of project:** Basic research (including archaeological digs, etc)

**Entity where project took place:** Geociencias Barcelona (geo3bcn-CSIC)

**Degree of contribution:** Scientific coordinator

**Type of entity:** State agency

**City of entity:** Barcelona, Cataluña, Spain

**Name principal investigator (PI, Co-PI....):** Robert Oliva; José Luis Sebastián Ávila

**Nº of researchers:** 2

**Participating entity/entities:** INSTITUTO DE MICROELECTRONICA DE BARCELONA

**Start date:** 26/11/2024

**Duration:** 1 day

**Total amount:** 49,68 €

**Narrative explanation:** Dos medidas hiperespectrales FX17 muestras suelo y CuSO4.



- 7** **Name of the project:** servicio Hiperespectral (Código cuenta interna CSIC: 026FUN)  
**Identify key words:** Surface spectroscopy  
**Type of project:** Basic research (including archaeological digs, etc) **Entity where project took place:** Geociencias Barcelona (geo3bcn-CSIC)  
**Degree of contribution:** Scientific coordinator  
**Type of entity:** State agency  
**City of entity:** Barcelona, Cataluña, Spain  
**Name principal investigator (PI, Co-PI....):** Robert Oliva; José Luis Sebastián Ávila  
**Nº of researchers:** 2  
**Participating entity/entities:** INSTITUTO DE MICROELECTRONICA DE BARCELONA  
**Start date:** 26/11/2024 **Duration:** 1 day  
**Total amount:** 24,84 €  
**Narrative explanation:** Medidas hiperespectrales muestras de arcilla, CuSO<sub>4</sub> y humus.
- 8** **Name of the project:** servicio Hiperespectral (Código cuenta interna CSIC: 026FUN) - proyecto Hydrocal (PID2020-114876GB-I00)  
**Identify key words:** Surface spectroscopy  
**Type of project:** Basic research (including archaeological digs, etc) **Entity where project took place:** Geociencias Barcelona (geo3bcn-CSIC)  
**Degree of contribution:** Scientific coordinator  
**Type of entity:** State agency  
**City of entity:** Barcelona, Cataluña, Spain  
**Name principal investigator (PI, Co-PI....):** Robert Oliva; Agustí Lobo; Adelina Geyer Traver  
**Nº of researchers:** 3  
**Start date:** 03/01/2024 **Duration:** 1 day  
**Total amount:** 2.488,62 €  
**Narrative explanation:** Servicio de adquisición y procesado de imágenes hiperespectrales en el terreno.
- 9** **Name of the project:** servicio Hiperespectral (Código cuenta interna CSIC: 026FUN)  
**Identify key words:** Surface spectroscopy  
**Type of project:** Basic research (including archaeological digs, etc) **Entity where project took place:** Geociencias Barcelona (geo3bcn-CSIC)  
**Degree of contribution:** realización medida experimental  
**Type of entity:** State agency  
**City of entity:** Barcelona, Cataluña, Spain  
**Name principal investigator (PI, Co-PI....):** Ramón Cuscó; Jordi Ibañez; Robert Oliva  
**Nº of researchers:** 3  
**Start date:** 01/11/2023 **Duration:** 1 day  
**Total amount:** 294,86 €  
**Narrative explanation:** Medidas de micro-Raman en muestras de minerales y meteoritos.
- 10** **Name of the project:** servicio Hiperespectral (Código cuenta interna CSIC: 026FUN)  
**Identify key words:** Surface spectroscopy  
**Type of project:** Basic research (including archaeological digs, etc) **Entity where project took place:** Geociencias Barcelona (geo3bcn-CSIC)  
**Degree of contribution:** Coordinator of total project, network or consortium  
**Type of entity:** State agency  
**City of entity:** Barcelona, Cataluña, Spain  
**Name principal investigator (PI, Co-PI....):** Robert Oliva; Agustí Lobo; Adelina Geyer Traver  
**Nº of researchers:** 3  
**Start date:** 30/06/2023 **Duration:** 1 day



**Total amount:** 885,78 €

**Narrative explanation:** Toma de imágenes hiperespectrales de muestras de origen volcánico.

## Results

### Industrial and intellectual property

**1 Title registered industrial property:** DataPro© software

**Description of qualities:** Licencia MIT, la cual es una licencia muy permisiva que permite usar, copiar, modificar, fusionar, publicar, distribuir, sublicenciar y vender el software de forma libre. La única obligación es mantener el aviso de copyright y el texto de la licencia en el código o en las distribuciones.

**Inventors/authors/obtainers:** Robert Oliva Vidal

**Entity holder of rights:** Registro de la Propiedad Intelectual de Cataluña

**Nº of application:** REGAGE26e00008453564

**Country of inscription:** Spain, Cataluña

**Date of register:** 28/01/2026

**Licences:** Yes

**Relevant results:** Desarrollador único del software DataPro para el procesado y análisis de gran cantidad de datos espectrales (más de 17000 líneas de código C++). Número de expediente: 00765-03028503. En tramitación, fecha efectiva y definitiva del registro: 28/01/2026.

**2 Title registered industrial property:** Proyecto técnico "Hyperspectral imaging of carnallites from Cabanasses" para la empresa ICL Iberia.

**Inventors/authors/obtainers:** Robert Oliva; Jordi Ibañez

**Entity holder of rights:** ICL Iberia

**Date of register:** 20/04/2023

### Results derived from specialized and transfer activities, not included in previous sections

**1 Description:** Proyecto técnico "Hyperspectral imaging of carnallites from Cabanasses" para la empresa ICL Iberia.

**Name of the principal Investigator (PI):** Robert Oliva

**Name of the Co-principal investigator (Co-PI):** Jordi Ibañez

**Degree of contribution:** Scientific coordinator

**New techniques or equipment:** Yes

**Results for improvement of products:** Yes

**Geographical area:** National

**Start date:** 20/04/2023

**Duration:** 2 months

**Relevant results:** Con el presente informe se estableció un método práctico para discriminar de forma objetiva y de bajo coste distintos tipos de muestras de carnallitas a partir de la reflectancia en dos longitudes de onda concretas, con aplicación a la industria minera. Empresa multinacional ICL Iberia.

**2 Description:** Transferencia de conocimiento. Estancia en TopGaN lasers Company, UNIPRESS (Polonia)

**Primary (UNESCO code):** 221109 - Electron carrier properties; 221125 - Semiconductors; 221190 - Solid state Physics. Foil; 221191 - Solid state Physics. Spectroscopy of solid

**Name of the principal Investigator (PI):** Robert Oliva

**Name of the Co-principal investigator (Co-PI):** Piotr Perlin

**Degree of contribution:** Coordinator of total project, network or consortium

**Spin-off R&D companies:** Yes



**Expert technologist:** Yes

**Geographical area:** European Union

**Start date:** 12/11/2019

**Duration:** 16 days

**3 Description:** Transferencia de conocimiento. Estancia en TopGaN lasers Company, UNIPRESS (Polonia)

**Primary (UNESCO code):** 221109 - Electron carrier properties; 221125 - Semiconductors; 221190 - Solid state Physics. Foil; 221191 - Solid state Physics. Spectroscopy of solid

**Name of the principal Investigator (PI):** Robert Oliva

**Name of the Co-principal investigator (Co-PI):** Piotr Perlin

**Degree of contribution:** Coordinator of total project, network or consortium

**Spin-off R&D companies:** Yes

**Expert technologist:** Yes

**Geographical area:** European Union

**Start date:** 10/08/2018

**Duration:** 15 days

## Knowledge transfer and exchange

I have experience in knowledge transfer with industry. I carried out two collaborations with the company TopGaN Lasers, a spin-off of Institute of High Pressure Physics PAS (UNIPRESS) (Poland), aimed at optimizing growth processes, quality control, and characterization of active materials for diodes and lasers based on the (In,Ga)N system. These activities were conducted within the framework of a project for which I am the Principal Investigator (Polonez3 – Marie Skłodowska-Curie grant agreement No. 665778), and took place in the form of research stays and seminars (10/08/2018–25/08/2018 and 27/10/2019–13/11/2019) at UNIPRESS, Warsaw (Poland).

In addition, I prepared a scientific-technical report for the company ICL Iberia (Iberpotash) S.A., in which I developed a method to optically discriminate between different types of mineral samples (carnallites), following the acquisition and analysis of hyperspectral images at the Spectroradiometry Laboratory, for which I am responsible.

Finally, I hold copyright and intellectual property rights for self-developed software (more than 17,000 registered lines of code) with a free distribution license (MIT) for the analysis of large-scale spectral files, DataPro®. The software includes a graphical user interface (GUI) and can be downloaded from my personal website (robertoliva.com) as well as from public repositories such as GitHub.



## Scientific and technological activities

### Scientific production

**H index:** 14

**Date of application:** 31/12/2025

**Source of H-Index:** SCOPUS

### Publications, scientific and technical documents

- 1** Robert Oliva; Beatriz de Simoni; Milosz Rybak; Jan Kopaczek; Agata Karolina Tołoczko; Jordi Ibáñez; Filip Dybala; Pawel Scharoch; Iva Plutnarova; Zdenek Sofer; Oscar Gomis; Pablo Botella; Daniel Errandonea; Nikolas Antonantos; Robert Kudrawiec. Pressure-induced phase transition on layered HgPSe<sub>3</sub> revealed by optical, structural and vibrational studies. *Nanoscale*. The Royal Society of Chemistry, 16/03/2026.

**DOI:** 10.1039/D5NR05417F

**Type of production:** Scientific paper

**Format:** Journal

**Position of signature:** 1

**Total no. authors:** 15

**Corresponding author:** No

**Impact source:** sciencedirect

**Category:** Science Edition - MATERIALS SCIENCE, MULTIDISCIPLINARY

**Impact index in year of publication:** 5.1

**Journal in the top 25%:** Yes

**Relevant results:** Primera autoría compartida entre los dos primeros autores.

- 2** Pau Grèbol-Tomàs; Jordi Ibáñez-Insa; Josep Maria Trigo-Rodríguez; Eloy Peña-Asensio; Robert Oliva; Daniel Díaz-Anichtchenko; Pablo Botella; Josu Sánchez-Martín; Robin Turnbull; Daniel Errandonea; Akun Liang; Catalin Popescu; Jordi Sort. Mechanical softening of lunar olivine probed via nanoindentation and high-pressure X-ray diffraction measurements. *Geosci. Front.*16, pp. 102110. ELSEVIER, 20/06/2025. Available on-line at: <<https://doi.org/10.1016/j.gsf.2025.102110>>.

**DOI:** 10.1016/j.gsf.2025.102110

**Type of production:** Scientific paper

**Format:** Journal

**Position of signature:** 5

**Total no. authors:** 13

**Corresponding author:** No

**Impact source:** sciencedirect

**Category:** Earth and Planetary Sciences (miscellaneous)

**Impact index in year of publication:** 2.111

**Journal in the top 25%:** Yes

**Source of citations:** WOS

**Citations:** 2

**Relevant results:** Artículo de acceso abierto (open access)

- 3** Hussien Osman; José Luis Rodrigo-Ramón; Shafi Ullah; Enrico Bandiello; Daniel Errandonea; Oscar Gomis; Tania García-Sánchez; Pablo Botella; Robert Oliva; Plácida Rodríguez-Hernández; Alfonso Muñoz; Catalin Popescu; Frederico G. Alabarse; Francisco Javier Manjón. Unconventional Electron-Deficient Multicenter Bonds in AIO<sub>3</sub> Perovskites. *Chem. Mater.*37, pp. 4187 - 4202. ACS, 30/05/2025. Available on-line at: <<https://doi.org/10.1021/acs.chemmater.5c00877>>.

**Type of production:** Scientific paper

**Format:** Journal

**Position of signature:** 9

**Total no. authors:** 14

**Corresponding author:** No

**Impact source:** sciencedirect

**Category:** Materials Chemistry

**Impact index in year of publication:** 8.6**Journal in the top 25%:** Yes**Source of citations:** WOS**Citations:** 5**Relevant results:** Artículo de acceso abierto (open access)

- 4** Giovanni Vescio; Joshua Diago Forero; Paolo Pellegrino; Sergio García de Mendoza; Robert Oliva; Jordi Ibáñez; Blas Garrido; Albert Cirera; Sergi Hernández. Temperature-Dependent Optical Properties of CsCu<sub>2</sub>I<sub>3</sub> Perovskites. Adv. Mater. Interfaces. 12, pp. 2500111. Wiley-VCH, 22/05/2025. Available on-line at: <<https://doi.org/10.1002/admi.202500111>>.

**Type of production:** Scientific paper**Format:** Journal**Position of signature:** 5**Total no. authors:** 9**Corresponding author:** No**Impact source:** sciencedirect**Category:** Mechanical Engineering**Impact index in year of publication:** 4.4**Journal in the top 25%:** Yes**Source of citations:** WOS**Citations:** 1**Relevant results:** Artículo de acceso abierto (open access)

- 5** Pablo Botella; Daniel Diaz-Anichtchenko; Robert Oliva; Jordi Ibañez; Papiya Saha; S.N. Achary; Frederico G. Alabarse; Daniel Errandonea. High-pressure investigations of ABiO<sub>3</sub>, A = Y<sup>3+</sup> and Yb<sup>3+</sup> type ternary oxides in Bi<sub>2</sub>O<sub>3</sub>-A<sub>2</sub>O<sub>3</sub> system. Next Mat.8, pp. 100735. ELSEVIER, 21/05/2025. Available on-line at: <<https://doi.org/10.1016/j.nxmate.2025.100735>>.

**DOI:** 10.1016/j.nxmate.2025.100735**Type of production:** Scientific paper**Format:** Journal**Position of signature:** 3**Total no. authors:** 8**Corresponding author:** No**Impact source:** SCImago**Category:** Engineering (miscellaneous)**Impact index in year of publication:** 1.9**Journal in the top 25%:** Yes**Source of citations:** WOS**Citations:** 1**Relevant results:** Artículo de acceso abierto (open access)

- 6** Sergio Ferrari; Daniel Diaz-Anichtchenko; Pablo Botella; Jordi Ibáñez; Robert Oliva; Alexei Kuzmin; Alfonso Muñoz; Frederico Alabarse; Daniel Errandonea. Pressure-induced decomposition of  $\beta$ -SnWO<sub>4</sub>. Result Phys.74, pp. 108304. ELSEVIER, 19/05/2025. Available on-line at: <<https://doi.org/10.1016/j.rinp.2025.108304>>.

**Type of production:** Scientific paper**Format:** Journal**Position of signature:** 5**Total no. authors:** 9**Corresponding author:** No**Impact source:** scimago**Category:** Physics and Astronomy (miscellaneous)**Impact index in year of publication:** 0.699**Journal in the top 25%:** Yes**Relevant results:** Artículo de acceso abierto (open access)

- 7** Ertugrul Karaca; David Santamaria-Perez; Alberto Otero-de-la-Roza; Robert Oliva; K. Sandeep Rao; Srungarpu N. Achary; Catalin Popescu; Daniel Errandonea. Pressure-induced decomposition of Bi<sub>14</sub>WO<sub>24</sub>. Results in Physics. 70, pp. 108170. 21/02/2025. Available on-line at: <<https://doi.org/10.1016/j.rinp.2025.108170>>.

**Type of production:** Scientific paper**Format:** Journal**Position of signature:** 4**Total no. authors:** 8**Corresponding author:** No**Impact source:** sciencedirect**Category:** Physics and Astronomy (miscellaneous)**Impact index in year of publication:** 4.9**Journal in the top 25%:** Yes**Source of citations:** sciencedirect**Citations:** 2

**Relevant results:** Artículo de acceso abierto (open access)

- 8** Houri S. Rahimi Mosafer; Josu Sánchez-Martín; Daniel Errandonea; Robin Turnbull; Jordi Ibáñez-Insa; Robert Oliva; Andrew Fitch; Catalin Popescu; Mirosław Kozłowski; Christine Martin; Alexey Maximenko; Anna Wolska; Marcin Klepka; Roman Minikayev; Wojciech Paszkowicz. Exploring thermal and elastic properties of Ca<sub>10</sub>Ni<sub>0.5</sub>(VO<sub>4</sub>)<sub>7</sub>: a study involving the use of synchrotron radiation facilities. *CrystEngComm*. 27, pp. 2343 - 2343. Royal Society of Chemistry, 14/01/2025. Available on-line at: <<https://doi.org/10.1039/d4ce01033g>>.

**Type of production:** Scientific paper

**Format:** Journal

**Position of signature:** 6

**Total no. authors:** 15

**Corresponding author:** No

**Impact source:** sciencedirect

**Category:** Condensed Matter Physics

**Impact index in year of publication:** 2.6

**Journal in the top 25%:** No

- 9** Pablo Botella; Josu Sanchez-Martin; Oscar Gomis; Robert Oliva; Samuel Gallego; Julio Pellicer-Porres; Gaston Gabarino; Frederico Alabarse; Srungarpu Nagabhusan Achary; Daniel Errandonea. High-Pressure Structural Study on the Effects of Pressure- Transmitting Media on Bi<sub>14</sub>MoO<sub>24</sub> and Bi<sub>14</sub>CrO<sub>24</sub> Compounds. *Crys. Growth Des.* 24, pp. 9482 - 9491. ACS Publications, 12/11/2024. Available on-line at: <<https://doi.org/10.1021/acs.cgd.4c00904>>.

**DOI:** 10.1021/acs.cgd.4c00904

**Type of production:** Scientific paper

**Format:** Journal

**Position of signature:** 4

**Total no. authors:** 10

**Corresponding author:** No

**Impact source:** sciencedirect

**Category:** Condensed Matter Physics

**Impact index in year of publication:** 3.458

**Journal in the top 25%:** No

**Source of citations:** WOS

**Citations:** 3

- 10** Daniel Diaz-Anichtchenko; Jordi Ibañez; Pablo Botella; Robert Oliva; Alexei Kuzmin; Li Wang; Alfonso Muñoz; Frederico Alabarse; Daniel Errandonea. Identification of the high-pressure phases of  $\alpha$ -SnWO<sub>4</sub> combining x-ray diffraction and crystal structure prediction. *Phys. B: Condens. Matt.* 696, pp. 416666. 28/10/2024. Available on-line at: <<https://doi.org/10.1016/j.physb.2024.416666>>.

**Type of production:** Scientific paper

**Format:** Journal

**Position of signature:** 4

**Total no. authors:** 9

**Corresponding author:** No

**Impact source:** sciencedirect

**Category:** Condensed Matter Physics

**Impact index in year of publication:** 4.9

**Journal in the top 25%:** No

**Source of citations:** WOS

**Citations:** 2

**Relevant results:** Artículo de acceso abierto (open access)

- 11** Ganesh Bera; Pablo Botella; Julio Pellicer; Daniel Diaz-Anichtchenko; Daniel Errandonea; Oscar Gomis; Robert Oliva; Jordi Ibañez; Frederico Alabarse; Susana Valencia; Fernando Rey; Alberto Otero-de-la-Rosa; David Santamaria-Perez. Structural stability and adsorption behaviour of CO<sub>2</sub>-loaded pure silica CHA and ITW zeolites upon compression. *Micropor. Mesopor. Mat.* 380, pp. 113317. ELSEVIER, 27/08/2024. Available on-line at: <<https://doi.org/10.1016/j.micromeso.2024.113317>>.

**DOI:** 10.1016/j.micromeso.2024.113317

**Type of production:** Scientific paper

**Format:** Journal

**Position of signature:** 7

**Total no. authors:** 13

**Corresponding author:** No

**Impact source:** sciencedirect

**Category:** Condensed Matter Physics

**Impact index in year of publication:** 4.7

**Journal in the top 25%:** Yes

**Source of citations:** WOS

**Citations:** 2



**Relevant results:** Artículo de acceso abierto (open access)

- 12** Daniel Errandonea; Robin Turnbull; Josu Sanchez-Martin; Robert Oliva; Alfonso Muñoz; Silvana Radescu; Andres Mujica; Lewis Blackburn; Catalin Popescu; Neil C. Hyatt; Jordi Ibáñez. A comparative study of the high-pressure structural stability of zirconolite materials for nuclear waste immobilisation. Results in Physics. 61, pp. 107704. 30/04/2024. Available on-line at: <<https://doi.org/10.1016/j.rinp.2024.107704>>.

**DOI:** 10.1016/j.rinp.2024.107704

**Type of production:** Scientific paper

**Format:** Journal

**Position of signature:** 4

**Total no. authors:** 11

**Corresponding author:** No

**Impact source:** ACS

**Category:** Physics and Astronomy (miscellaneous)

**Impact index in year of publication:** 4.4

**Journal in the top 25%:** Yes

**Source of citations:** WOS

**Citations:** 6

**Relevant results:** Artículo de acceso abierto (open access)

- 13** David Santamaria-Perez; Raquel Chuliá-Jordán; Javier Gonzalez-Platas; Alberto Otero-de-la-Rosa; Javier Ruiz-Funetes; Julio Pellicer; Robert Oliva; Catalin Popescu. Polymorphism and Phase Stability of Hydrated Magnesium Carbonate Nesquehonite  $MgCO_3 \cdot 3H_2O$ : Negative Axial Compressibility and Thermal Expansion in a Cementitious Material. Crys. Growth Des. 24, pp. 1159 - 1169. ACS Publications, 24/01/2024. Available on-line at: <<https://doi.org/10.1021/acs.cgd.3c01171>>.

**DOI:** 10.1021/acs.cgd.3c01171

**Type of production:** Scientific paper

**Format:** Journal

**Position of signature:** 7

**Total no. authors:** 8

**Corresponding author:** No

**Impact source:** sciencedirect

**Category:** Condensed Matter Physics

**Impact index in year of publication:** 3.458

**Journal in the top 25%:** No

**Relevant results:** Artículo de acceso abierto (open access)

- 14** Josu Sánchez-Martín; Julio Pellicer-Porres; Akun Liang; Jordi Ibáñez; Robert Oliva; Catalin Popescu; Zhang Zheng He; Plácida Rodríguez-Hernández; Alfonso Muñoz; Daniel Errandonea. High-Pressure Vibrational and Structural Properties of  $Ni_3V_2O_8$  and  $Co_3V_2O_8$  up to 20 GPa. J. Phys. Chem. C. 127, pp. 21684. ACS, 30/10/2023. Available on-line at: <<https://doi.org/10.1021/acs.jpcc.3c04019>>.

**Type of production:** Scientific paper

**Format:** Journal

**Position of signature:** 5

**Total no. authors:** 10

**Corresponding author:** No

**Impact source:** ACS

**Category:** Electronic, Optical and Magnetic Materials

**Impact index in year of publication:** 3.7

**Journal in the top 25%:** Yes

**Source of citations:** WOS

**Citations:** 5

**Relevant results:** Artículo de acceso abierto (open access)

- 15** Pablo Botella; David Santamaria-Perez; Alberto Otero-de-la-Roza; Robert Oliva; Srungarpu N. Achary; Catalin Popescu; Daniel Errandonea. High-pressure structural phase transition on  $Bi_4MoO_{24}$ . Journal of Physics and Chemistry of Solids. 182 - 111598, Elsevier, 11/10/2023.

**DOI:** 10.1016/j.jpcs.2023.111598

**Type of production:** Scientific paper

**Format:** Journal

**Position of signature:** 4

**Total no. authors:** 7

**Corresponding author:** No

**Impact source:** WOS (JCR)

**Category:** Chemistry - General Chemistry

**Impact index in year of publication:** 4.38

**Journal in the top 25%:** Yes

**Source of citations:** WOS**Citations:** 7

- 16** Robin Turnbull; Josu Sánchez-Martín; Robert Oliva; Jordi Ibáñez; Catalin Popescu; Yaron Rodríguez-Hernández; Alfonso Muñoz; Gwilherm Nénert; David Vie; Gwilherm Nénert; Daniel Errandonea. High-pressure evolution of silver iodate (AgIO<sub>3</sub>) and the  $\gamma$ -AgIO<sub>3</sub> phase. *Physical Review Materials*. 7 - 084606, APS, 25/08/2023.

**DOI:** 10.1103/PhysRevMaterials.7.084606**Type of production:** Scientific paper**Format:** Journal**Position of signature:** 3**Total no. authors:** 11**Corresponding author:** No**Impact source:** WOS (JCR)**Category:** Materials Science**Impact index in year of publication:** 4.036**Journal in the top 25%:** Yes**Source of citations:** WOS**Citations:** 1**Relevant results:** Artículo de acceso abierto (open access)

- 17** Robert Oliva; Esther Ritov; Faris Horani; Iñigo Etxebarria; Adam K. Budniak; Yaron Amouyal; Efrat Lifshitz; Mael Guennou. Lattice dynamics and in-plane antiferromagnetism in MnZnPS<sub>3</sub> across the entire composition range. *Physical review B*. 107 - 104415, APS, 16/05/2023.

**DOI:** 10.1103/PhysRevB.107.104415**Type of production:** Scientific paper**Format:** Journal**Position of signature:** 1**Total no. authors:** 8**Corresponding author:** Yes**Impact source:** WOS (JCR)**Category:** Condensed Matter Physics**Impact index in year of publication:** 4.036**Journal in the top 25%:** Yes**Source of citations:** WOS**Citations:** 11

- 18** David Santamaria-Perez; Raquel Chuliá-Jordán; Alberto Otero-de-la-Roza; Robert Oliva; Catalin Popescu. High-Pressure Experimental And DFT Structural Studies Of Aurichalcite Mineral. *Minerals*. 13 - 619, MDPI, 28/04/2023.

**DOI:** 10.3390/min13050619**Type of production:** Scientific paper**Format:** Journal**Position of signature:** 4**Total no. authors:** 5**Corresponding author:** No**Impact source:** WOS (JCR)**Category:** Geology**Impact index in year of publication:** 2.5**Journal in the top 25%:** No**Source of citations:** WOS**Citations:** 2**Relevant results:** Artículo de acceso abierto (open access)

- 19** Robert Oliva; Danila Amoroso; Constance Toulouse; Con Xin; Pierre Bouvier; Pierre Fertey; Philippe Veber; Mario Maglione; Philippe Ghosez; Jens Kreisel; Mael Guennou. Stability of the tetragonal phase of BaZrO<sub>3</sub> under high pressure. *Physical review B*. 106 - 064105, APS, 16/08/2022.

**DOI:** 10.1103/PhysRevB.106.064105**Type of production:** Scientific paper**Format:** Journal**Position of signature:** 1**Total no. authors:** 11**Corresponding author:** No**Impact source:** WOS (JCR)**Category:** Condensed Matter Physics**Impact index in year of publication:** 4.036**Journal in the top 25%:** Yes**Source of citations:** WOS**Citations:** 9



**Relevant publication:** No

- 20** Robert Oliva; Tomasz Wozniak; Paulo E. Faria Jr.; Filip Dybala; Jan Kopaczek; Jaroslav Fabian; Pawel Scharoch; Robert Kudrawiec. Strong Substrate Strain Effects in Multilayered WS<sub>2</sub> Revealed by High-Pressure Optical Measurements. ACS Applied Materials and Interfaces. 14, pp. 19857 - 19686. 01/01/2022.

**DOI:** 10.1021/acsami.2c01726

**Type of production:** Scientific paper

**Format:** Journal

**Position of signature:** 1

**Total no. authors:** 8

**Corresponding author:** Yes

**Impact source:** SCImago

**Category:** Materials Science (miscellaneous)

**Impact index in year of publication:**

**Journal in the top 25%:** Yes

**Source of citations:** WOS

**Citations:** 21

**Relevant results:** Artículo de acceso abierto (open access)

- 21** Jordi Ibáñez-Insa; Tomasz Woźniak; Robert Oliva; Catalin Popescu; Sergi Hernández; Julià López-Vidrier. Structural and High-Pressure Properties of Rheniite (ReS<sub>2</sub>) and (Re,Mo)S<sub>2</sub>. Minerals. 11 - 207, MDPI, 16/02/2021.

**DOI:** 10.3390/min11020207

**Type of production:** Scientific paper

**Format:** Journal

**Position of signature:** 3

**Total no. authors:** 6

**Corresponding author:** No

**Impact source:** <https://www.mdpi.com/journal/minerals>

**Category:** Geology

**Impact index in year of publication:** 2.572

**Journal in the top 25%:** No

**Source of citations:** WOS

**Citations:** 7

**Relevant results:** Artículo de acceso abierto (open access)

- 22** Agata Tolloczko; Robert Oliva; Tomasz Wozniak; Jan Kopaczek; Pawel Scharoch; Robert Kudrawiec. Anisotropic optical properties of GeS investigated by optical absorption and photoreflectance. Material Advances. 1 - 1886, pp. 1886 - 1894. 14/08/2020. Available on-line at: <<https://doi.org/10.1039/d0ma00146e>>.

**DOI:** 10.1039/d0ma00146e

**Type of production:** Scientific paper

**Format:** Journal

**Position of signature:** 2

**Total no. authors:** 6

**Corresponding author:** No

**Impact source:** WOS (JCR)

**Category:** Materials Science (miscellaneous)

**Impact index in year of publication:** 3.575

**Journal in the top 25%:** Yes

**Source of citations:** WOS

**Citations:** 40

**Relevant results:** Artículo de acceso abierto (open access)

- 23** Jordi Ibáñez; Juan Angel Sans; Vanesa Cuenca-Gotor; Robert Oliva; Oscar Gomis; Plácida Rodríguez-Hernández; Alfonso Muñoz; Ulises Rodríguez-Mendoza; Matías Velázquez; Philippe Veber; Catalin Popescu; Francisco Javier Manjón. Structural and Lattice-Dynamical Properties of Tb<sub>2</sub>O<sub>3</sub> under Compression: A Comparative Study with Rare Earth and Related Sesquioxides. Inorganic Chemistry. 59 - 9648, pp. 9648 - 9666. 20/07/2020.

**DOI:** 10.1021/acs.inorgchem.0c00834

**Type of production:** Scientific paper

**Format:** Journal

**Position of signature:** 4

**Total no. authors:** 12

**Corresponding author:** Yes

**Impact source:** WOS (JCR)

**Category:** Inorganic Chemistry

**Impact index in year of publication:** 4.825

**Journal in the top 25%:** Yes

**Source of citations:** WOS**Citations:** 35**Relevant results:** Artículo de acceso abierto (open access) en:  
<https://hal.science/hal-02919777/file/acs.inorgchem.0c00834.pdf>

- 24** Robert Oliva; Tomasz Wozniak; Filip Dybala; Agata Tolloczko; Jan Kopaczek; Pawel Scharoch; Robert Kudrawiec. Valley polarization investigation of GeS under high pressure. *Physical Review B*. 101 - 235205, pp. 235205. 19/06/2020.

**DOI:** 10.1103/PhysRevB.101.235205**Type of production:** Scientific paper**Format:** Journal**Position of signature:** 1**Total no. authors:** 7**Corresponding author:** Yes**Impact source:** WOS (JCR)**Category:** Condensed Matter Physics**Impact index in year of publication:** 3.575**Journal in the top 25%:** Yes**Source of citations:** WOS**Citations:** 14

- 25** Magda Antonia Antoniak; Szymon J. Zelewski; Robert Oliva; Andrzej Żak; Robert Kudrawiec; Marcin Nyk. Combined Temperature and Pressure Sensing Using Luminescent NaBiF<sub>4</sub>:Yb,Er Nanoparticles. *ACS Applied Nano Materials*. 5 - 4209, pp. 4209 - 4217. Esch-sur-Alzette, Luxembourg (Grand-Duché)(Luxembourg): 22/05/2020.

**DOI:** 10.1021/acsanm.0c00403**Type of production:** Scientific paper**Format:** Journal**Position of signature:** 3**Total no. authors:** 6**Corresponding author:** No**Impact source:** WOS (JCR)**Category:** Materials Science (miscellaneous)**Impact index in year of publication:** 5.6**Journal in the top 25%:** Yes**Source of citations:** WOS**Citations:** 96**Relevant results:** Artículo de acceso abierto (open access)

- 26** Robert Oliva; Tomasz Wozniak; Filip Dybala; Jan Kopaczek; Pawel Scharoch; Robert Kudrawiec. Hidden spin-polarized bands in semiconducting 2H-MoTe<sub>2</sub>. *Materials Research Letters*. 8, pp. 75 - 81. Taylor & Francis, 15/12/2019.

**DOI:** 10.1080/21663831.2019.1702113**Type of production:** Scientific paper**Format:** Journal**Position of signature:** 1**Total no. authors:** 6**Corresponding author:** Yes**Impact source:** WOS (JCR)**Category:** Materials Science (miscellaneous)**Impact index in year of publication:** 7.44**Journal in the top 25%:** Yes**Position of publication:** 34**No. of journals in the cat.:** 293**Source of citations:** WOS**Citations:** 20**Relevant results:** Artículo de acceso abierto (open access)

- 27** Robert Oliva; Magdalena Laurien; Filip Dybala; Jan Kopaczek; Ying Quin; Sefaattin Tongay; Oleg Rubel; Robert Kudrawiec. Pressure dependence of direct optical transitions in ReS<sub>2</sub> and ReSe<sub>2</sub>. *npj 2D Materials and Applications*. 3, pp. 20. Nature publishing group, 08/05/2019.

**DOI:** 10.1038/s41699-019-0102-x**Type of production:** Scientific paper**Format:** Scientific and technical document or report**Position of signature:** 1**Total no. authors:** 8**Corresponding author:** Yes**Impact source:** WOS (JCR)**Category:** Materials Science (miscellaneous)

**Impact index in year of publication:** 9.338**Journal in the top 25%:** Yes**Source of citations:** WOS**Citations:** 52**Relevant results:** Artículo de acceso abierto (open access)

- 28** Jordi Ibáñez; Tomasz Wozniak; Filip Dybala; Robert Oliva; Sergi Hernández; Robert Kudrawiec. High-pressure Raman scattering in bulk HfS<sub>2</sub>: comparison of density functional theory methods in layered MS<sub>2</sub> compounds (M = Hf, Mo) under compression. *Scientific Reports*. 8, pp. 12757 - 12767. Nature Publishing Group, 24/08/2018.

**DOI:** 10.1038/s41598-018-31051-y**Type of production:** Scientific paper**Format:** Journal**Position of signature:** 4**Total no. authors:** 6**Corresponding author:** Yes**Impact source:** WOS (JCR)**Category:** Science Edition - MULTIDISCIPLINARY SCIENCES**Impact index in year of publication:** 4.122**Journal in the top 25%:** Yes**Position of publication:** 12**No. of journals in the cat.:** 64**Source of citations:** WOS**Citations:** 33**Relevant results:** Artículo de acceso abierto (open access)

- 29** Robert Oliva; Szymon Zelewski; Lukasz Janicki; Katarzyna Gwózdź; Jaroslaw Serafinczuk; Mariusz Rudzinski; Ekmel Özbay; Robert Kudrawiec. Determination of the band gap of indium-rich InGaN by means of photoacoustic spectroscopy. *Semiconductor Science and Technology*. 33, pp. 035007 - 035013. IOP Publishing, 05/02/2018.

**DOI:** 10.1088/1361-6641/aaa908**Type of production:** Scientific paper**Format:** Journal**Position of signature:** 1**Total no. authors:** 8**Corresponding author:** Yes**Impact source:** WOS (JCR)**Category:** Electronic, Optical and Magnetic Materials**Impact index in year of publication:** 2.28**Journal in the top 25%:** Yes**Source of citations:** WOS**Citations:** 10

- 30** Robert Oliva; Alfredo Segura; Jordi Ibáñez; Tomohiro Yamaguchi; Yasushi Nanishi; Lluís Artús Surroca. Pressure dependence of the refractive index in wurtzite and rocksalt indium nitride. *Applied physics letters*. 105, pp. 232111. American Institute of Physics, 10/12/2014. Available on-line at: <<http://dx.doi.org/10.1063/1.4903860>>.

**Type of production:** Scientific paper**Format:** Journal**Position of signature:** 1**Degree of contribution:** Author or co-author of article in journal with external admissions assessment committee**Total no. authors:** 6**Corresponding author:** No**Impact source:** WOS (JCR)**Category:** Science Edition - PHYSICS, APPLIED**Impact index in year of publication:** 3.293**Journal in the top 25%:** Yes**Position of publication:** 29**No. of journals in the cat.:** 146**Source of citations:** WOS**Citations:** 18**Relevant results:** Artículo de acceso abierto (open access) en: [https://digital.csic.es/bitstream/10261/129546/1/Oliva\\_Applied\\_Physics\\_Letters\\_105\\_232111.pdf](https://digital.csic.es/bitstream/10261/129546/1/Oliva_Applied_Physics_Letters_105_232111.pdf)

- 31** Robert Oliva; Jordi Ibáñez; Ramon Cuscó; Armin Dadgar; Alois Krost; Jateen Gandhi; Abdelhak Bensaoula; Lluís Artús. High-pressure Raman scattering in InGaN heteroepitaxial layers: Effect of the substrate on the phonon pressure coefficients. *Applied Physics Letters*. 104, pp. 142101 - 142101. 07/04/2014. Available on-line at: <<http://dx.doi.org/10.1063/1.4870529>>.

**Type of production:** Scientific paper**Format:** Journal

**Position of signature:** 1**Total no. authors:** 8**Impact source:** WOS (JCR)**Impact index in year of publication:** 3.293**Position of publication:** 29**Source of citations:** WOS**Degree of contribution:** Author or co-author of article in journal with external admissions assessment committee**Corresponding author:** No**Category:** Science Edition - PHYSICS, APPLIED**Journal in the top 25%:** Yes**No. of journals in the cat.:** 146**Citations:** 2

- 32** Jordi Ibáñez; Robert Oliva; Francisco Javier Manjón; Alfredo Segura; Tomohiro Yamaguchi; Yamaguchi Nanishi; Ramón Cuscó; Lluís Artús. High-pressure lattice dynamics in wurtzite and rocksalt indium nitride investigated by means of Raman spectroscopy. *Phys. Rev. B.* 88, pp. 115202-1 - 115202-13. American Physical Society, 05/09/2013. Available on-line at: <<http://link.aps.org/doi/10.1103/PhysRevB.88.115202>>.

**Type of production:** Scientific paper**Position of signature:** 2**Total no. authors:** 8**Impact source:** WOS (JCR)**Impact index in year of publication:** 3.513**Source of citations:** WOS**Format:** Journal**Degree of contribution:** Author or co-author of article in journal with external admissions assessment committee**Corresponding author:** No**Category:** Condensed Matter Physics**Journal in the top 25%:** Yes**Citations:** 17**Relevant results:** Artículo de acceso abierto (open access) disponible en: <https://digital.csic.es/handle/10261/85690>

- 33** Robert Oliva; Jordi Ibáñez; Lluís Artús; Ramón Cuscó; Jesús Zúñiga-Pérez; Vicente Muñoz-Sanjosé. High-pressure Raman scattering of CdO thin films grown by metal-organic vapor phase epitaxy. *Journal of Applied Physics.* 113, pp. 053514-1 - 053514-5. 06/02/2013. Available on-line at: <<http://dx.doi.org/10.1063/1.4790383>>.

**Type of production:** Scientific paper**Position of signature:** 1**Total no. authors:** 6**Impact source:** WOS (JCR)**Impact index in year of publication:** 2.126**Source of citations:** WOS**Format:** Journal**Degree of contribution:** Author or co-author of article in journal with external admissions assessment committee**Corresponding author:** No**Category:** Physics and Astronomy (miscellaneous)**Journal in the top 25%:** Yes**Citations:** 27**Relevant results:** Artículo de acceso abierto (open access) disponible en: <https://digital.csic.es/handle/10261/93140>

- 34** Rafael Jiménez-Riobóo; Ramón Cuscó; Robert Oliva; Núria Domènech-Amador; Carlos Prieto; Jordi Ibáñez; Chris Boney; Abdelhak Bensaoula; Lluís Artús. Brillouin scattering determination of the surface acoustic wave velocity in InxGa1-xN: A probe into the elastic constants. *Applied Physics Letters.* 101, pp. 062103-1 - 062103-4. 08/08/2012. Available on-line at: <<http://dx.doi.org/10.1063/1.4744961>>.

**Type of production:** Scientific paper**Position of signature:** 3**Total no. authors:** 9**Impact source:** WOS (JCR)**Impact index in year of publication:** 3.293**Position of publication:** 29**Source of citations:** WOS**Format:** Journal**Degree of contribution:** Author or co-author of article in journal with external admissions assessment committee**Corresponding author:** No**Category:** Science Edition - PHYSICS, APPLIED**Journal in the top 25%:** Yes**No. of journals in the cat.:** 146**Citations:** 12**Relevant results:** Artículo de acceso abierto (open access) disponible en: [https://digital.csic.es/bitstream/10261/77338/1/Cusco%202012%20ApplPhysLett\\_101\\_062103.pdf](https://digital.csic.es/bitstream/10261/77338/1/Cusco%202012%20ApplPhysLett_101_062103.pdf)



- 35** Jordi Ibáñez; Alfredo Segura; Braulio García-Domene; Robert Oliva; Francisco Javier Manjón; Tomohiro Yamaguchi; Yasushi Nanishi; Lluís Artús. High-pressure optical absorption in InN: Electron density dependence in the wurtzite phase and reevaluation of the indirect band gap of rocksalt InN. *Phys. Rev. B.* 86, pp. 035210-1 - 035210-5. American Physical Society, 24/07/2012. Available on-line at: <<http://link.aps.org/doi/10.1103/PhysRevB.86.035210>>.
- Type of production:** Scientific paper  
**Position of signature:** 4  
**Total no. authors:** 8  
**Impact source:** WOS (JCR)  
**Impact index in year of publication:** 3.513  
**Source of citations:** WOS
- Format:** Journal  
**Degree of contribution:** Author or co-author of article in journal with external admissions assessment committee  
**Corresponding author:** No  
**Category:** Condensed Matter Physics  
**Journal in the top 25%:** Yes  
**Citations:** 9
- Relevant results:** Artículo de acceso abierto, sujeto a licencia de distribución AIP, disponible en: [https://personales.upv.es/~fjmanjon/PRB86\\_035210.pdf](https://personales.upv.es/~fjmanjon/PRB86_035210.pdf)
- 36** Robert Oliva; Jordi Ibáñez; Ramón Cuscó; Robert Kudrawiec; Jaroslaw Serafiniczuk; Oscar Martínez; Juan Jiménez; Mohamed Henini; Christopher Boney; Abdelhak Bensaoula; Lluís Artús. Raman scattering by the E<sub>2h</sub> and A<sub>1</sub>(LO) phonons of In<sub>x</sub>Ga<sub>1-x</sub>N epilayers (0.25 < x < 0.75) grown by molecular beam epitaxy. *Journal of Applied Physics.* 111 - 6, pp. 063502 - 063511. 16/05/2012. Available on-line at: <<http://dx.doi.org/10.1063/1.3693579>>.
- Type of production:** Scientific paper  
**Position of signature:** 1  
**Total no. authors:** 11  
**Impact source:** WOS (JCR)  
**Impact index in year of publication:** 2.126  
**Source of citations:** WOS
- Format:** Journal  
**Degree of contribution:** Author or co-author of article in journal with external admissions assessment committee  
**Corresponding author:** No  
**Category:** Physics and Astronomy (miscellaneous)  
**Journal in the top 25%:** Yes  
**Citations:** 29
- Relevant results:** Artículo de acceso abierto (open access) disponible en: <https://digital.csic.es/handle/10261/79879>
- 37** Jordi Ibáñez; Alexandra Rapaport; Christopher Boney; Robert Oliva; Ramon Cuscó; Abdelhak Bensaoula; Lluís Artús. Raman scattering by folded acoustic phonons in InGa<sub>N</sub>/Ga<sub>N</sub> superlattices. *Journal of Raman Spectroscopy.* 43, pp. 237 - 240. John Wiley & Sons, Ltd., 14/07/2011. Available on-line at: <<http://dx.doi.org/10.1002/jrs.3028>>. ISSN 1097-4555
- Type of production:** Scientific paper  
**Position of signature:** 4  
**Total no. authors:** 7  
**Impact source:** WOS (JCR)  
**Impact index in year of publication:** 2.306  
**Position of publication:** 8  
**Source of citations:** SCOPUS
- Format:** Journal  
**Degree of contribution:** Author or co-author of article in journal with external admissions assessment committee  
**Corresponding author:** No  
**Category:** Spectroscopy  
**Journal in the top 25%:** Yes  
**No. of journals in the cat.:** 43  
**Citations:** 14
- 38** Jordi Ibáñez; Francisco Javier Manjón; Alfredo Segura; Robert Oliva; Ramón Cuscó; Rosario Vilaplana; Tomohiro Yamaguchi; Yasushi Nanishi; Lluís Artús. High-pressure Raman scattering in wurtzite indium nitride. *Applied Physics Letters.* 99, pp. 011908 - 011911. 07/07/2011. Available on-line at: <<http://dx.doi.org/10.1063/1.3609327>>.
- Type of production:** Scientific paper  
**Position of signature:** 4  
**Total no. authors:** 9  
**Impact source:** WOS (JCR)  
**Impact index in year of publication:** 3.293
- Format:** Journal  
**Degree of contribution:** Author or co-author of article in journal with external admissions assessment committee  
**Corresponding author:** No  
**Category:** Science Edition - PHYSICS, APPLIED  
**Journal in the top 25%:** Yes

**Position of publication:** 29**No. of journals in the cat.:** 146**Source of citations:** WOS**Citations:** 17**Relevant results:** Artículo de acceso abierto (sujeto a licencia de distribución AIP) disponible en: [https://personales.upv.es/~fjmanjon/APL99\\_011908.pdf](https://personales.upv.es/~fjmanjon/APL99_011908.pdf)

- 39** Jordi Ibañez; Robert Oliva; Martin De la Mare; Martin Schmidbauer; Sergi Hernández; Paolo Pellegrino; David Scurr; Ramon Cusco; Lluís Artus; Muhammad Shafi; Riaz Mari; Mohamed Henini; Qindong Zhuang; Aurelien Godenir; Anthony Krier. Structural and optical properties of dilute InAsN grown by molecular beam epitaxy. *Journal of Applied Physics*. 108, pp. 103504 - 103512. 17/11/2010. Available on-line at: <<http://dx.doi.org/10.1063/1.3509149>>.

**DOI:** 10.1063/1.3509149**Type of production:** Scientific paper**Format:** Journal**Position of signature:** 2**Degree of contribution:** Author or co-author of article in journal with external admissions assessment committee**Total no. authors:** 15**Corresponding author:** No**Impact source:** WOS (JCR)**Category:** Physics and Astronomy (miscellaneous)**Impact index in year of publication:** 2.126**Journal in the top 25%:** Yes**Source of citations:** WOS**Citations:** 19**Relevant results:** Artículo de acceso abierto (sujeto a licencia de distribución AIP) disponible en: <https://www-web.nottingham.ac.uk/~ppzmmh/mywebsite/Publications/JAP/10%20Ibanez.pdf>

## Works presented at national or international conferences

- 1** **Title of the work:** Structural and compositional characterization of fehrite from Les Ferreres Mine (Ripollès, Catalonia)  
**Name of the conference:** IOCMS2026  
**Type of participation:** Participatory - oral communication  
**City of event:** Online,  
**Date of event:** 10/03/2026  
**End date:** 12/03/2026  
**Organising entity:** MDPI **Type of entity:** Business  
 Abigail Jimenez Franco; Joan Rosell-Riba; Jose Luis Garrido-Rufaste; Joan Vinyoles-Verdaguer; Pedro Minguez-de-la-Villa; Jordi Ibañez; Robert Oliva.
- 2** **Title of the work:** Temperature and Pressure Dependence of the Optical Properties of Inkjet-Printed Lead-Free Perovskite TEA<sub>2</sub>SnI<sub>4</sub>  
**Name of the conference:** EMRS - 2025 Spring Meeting  
**Type of participation:** Participatory - poster  
**City of event:** Strasbourg, France  
**Date of event:** 29/05/2025  
**End date:** 29/05/2025  
**Organising entity:** European Materials Research Society **Type of entity:** Foundation  
 Kenneth Lobo; Giovanni Vescio; Robert Oliva; Jordi Ibañez; D. Dirin; M.V. Kovalenko; B. Garrido; Albert Cirera; Sergi Hernández.
- 3** **Title of the work:** Structural and compositional characterization of fehrite from Les Ferreres Mine (Ripollès, Catalonia) (accepted)  
**Name of the conference:** The 3rd International Online Conference on Mineral Science  
**City of event:** Online, Berlin, Germany

**Date of event:** 10/03/2025

**End date:** 12/03/2025

**Organising entity:** MDPI

Abigail Jiménez-Franco; Joan Rosell-Riba; José Luis Garrido-Rufaste; Joan Vinyoles-Verdaguer; Pedro Minguez-de-la-Villa; Robert Oliva-Vidal; Jordi Ibáñez-Insa.

**4 Title of the work:** Chemical Bonding in CsIO<sub>3</sub> under Pressure

**Name of the conference:** 1st Greenmat Workshop

**City of event:** Burjassot, Comunitat Valenciana, Spain

**Date of event:** 12/12/2024

**Organising entity:** Conselleria de educació, Universidades y Empleo

**City organizing entity:** Valencia, Comunitat Valenciana, Spain

José Luis Rodrigo-Ramón; Hussein H. Osman; Shafi Ullah; Enrico Bandiello; Daniel Errandonea; Oscar Gomis; Tania García-Sánchez; Pablo Botella; Robert Oliva; Plácida Rodríguez-Hernández; Alfonso Muñoz; Catalin Popescu; Frederico Alabarse; Francisco Javier Manjón.

**5 Title of the work:** Structural Stability and Adsorption Behaviour of CO<sub>2</sub>-Loaded Pure Silica CHA Zeolite under High Pressure conditions

**Name of the conference:** International Union of Crystallography (IUCr) Congress / IUCr meetings

**Type of event:** Conference

**Type of participation:** Participatory - poster

**City of event:** Padova, Italy

**Date of event:** 26/08/2024

**End date:** 30/08/2024

**Organising entity:** ECM34

Ganesh Bera; Pablo Botella; Julio Pellicer-Porres; Daniel Diaz-Anichtchenko; Daniel Errandonea; Oscar Gomis; Robert Oliva; Jordi Ibáñez; Frederico Alabarse; Susana Valencia; Fernando Rey; Alberto A. Otero-de-la-Rosa; David Santamaria-Perez. En: Acta Crystallographica A. A80, pp. e411. Available on-line at: <<https://doi.org/10.1107/S2053273324095883>>.

**6 Title of the work:** High-pressure Structural Stability of Ni<sub>3</sub>V<sub>2</sub>O<sub>8</sub> and Co<sub>3</sub>V<sub>2</sub>O<sub>8</sub>: Raman and Infrared Spectroscopy (Ni, Co) and X-ray diffraction (Co) studies

**Name of the conference:** 28th AIRAPT and 60th EHPRG

**City of event:** Edinburgh, United Kingdom

**Date of event:** 23/07/2023

**End date:** 28/07/2023

**Organising entity:** 28th AIRAPT and 60th EHPRG    **Type of entity:** Foundation

**City organizing entity:** Edinburgh, United Kingdom

Josu Sánchez-Martín; Julio Pellicer-Porres; Jordi Ibáñez; Robert Oliva; Catalin Popescu; ZhangZheng He; Akun Liang; Plácida Rodríguez-Hernández; Alfonso Muñoz; Daniel Errandonea.

**7 Title of the work:** Investigation of the vibrational and magnetic properties of Mn<sub>x</sub>Zn<sub>1-x</sub>P<sub>2</sub>S<sub>7</sub> by means of Raman spectroscopy

**Name of the conference:** International Symposium on Applications of Ferroelectrics

**Type of participation:** Participatory - oral communication

**Corresponding author:** Yes

**City of event:** Tours, France

**Date of event:** 27/06/2022

**End date:** 01/07/2022

**Organising entity:** ISAF 2022

Robert Oliva.



- 8** **Title of the work:** Polar Phonon Modes in Ferroelastic BiVO<sub>4</sub>  
**Name of the conference:** ISAF-PFM-ECAPD 2022  
**Corresponding author:** No  
**Date of event:** 27/06/2022  
**End date:** 01/07/2022  
**Organising entity:** ISAF 2022  
Mael Guennou; Constance Toulouse; Robert Oliva; Marine Verseils; Jean-Blaise Brubach; Pascale Roy.
- 9** **Title of the work:** Vibrational and Magnetic Properties of MnZnPS<sub>3</sub> Revealed by Low-Temperature Raman Spectroscopy  
**Name of the conference:** ISAF-PFM-ECAPD 2022  
**Type of participation:** Participatory - poster  
**Corresponding author:** Yes  
**City of event:** Tours, France  
**Date of event:** 27/06/2022  
**End date:** 01/07/2022  
**Organising entity:** ISAF 2022  
Robert Oliva; Faris Horani; Esther Ritov; Efrat Lifshitz; Mael Guennou.
- 10** **Title of the work:** Vibrational and magnetic properties of MnxZn1-xPS<sub>3</sub> investigated by means of Raman spectroscopy  
**Name of the conference:** 38th International symposium on dynamical properties of solids  
**Type of participation:** Participatory - Plenary session  
**Corresponding author:** Yes  
**City of event:** Luxembourg, Luxembourg  
**Date of event:** 06/09/2021  
**End date:** 08/09/2021  
**Organising entity:** Dyproso  
**City organizing entity:** Luxembourg  
Robert Oliva.
- 11** **Title of the work:** High-pressure vibrational and magnetic properties of MnxZn1-xPS<sub>3</sub> investigated by means of Raman spectroscopy  
**Name of the conference:** Internation School of Oxide Electronics  
**Type of participation:** Participatory - poster  
**Corresponding author:** Yes  
**City of event:** Ajaccio, France  
**Date of event:** 24/08/2021  
**End date:** 03/09/2021  
**Organising entity:** ISOE 2021  
Robert Oliva; Faris Horani; Esty Ritov; Efrat Lifshitz; Mael Guennou.
- 12** **Title of the work:** Rare-earth sesquioxides under compression: a review based on recent results on structural and vibrational properties of Tb<sub>2</sub>O<sub>3</sub>  
**Name of the conference:** 58th EHPRG Meeting on High Pressure Science and Technology  
**Type of event:** Conference  
**Type of participation:** Participatory - invited / keynote talk  
**City of event:** Tenerife, Spain  
**Date of event:** 10/09/2020  
**Organising entity:** EHPRG58-2020



Francisco Javier Manjón; Jordi Ibáñez; Angel Sans; Vanesa Cuenca-Gotor; Robert Oliva; Oscar Gomis; Placida Rodríguez-Hernández; Alfonso Muñoz; Ulises Rodríguez-Mendoza; Matías Velázquez; Philippe Veber; Catalin Popescu.

- 13** **Title of the work:** Photoreflectance spectroscopy of MoTe<sub>2</sub> at high hydrostatic pressures  
**Name of the conference:** The 9th international conference on low dimensional structures and devices  
**Type of participation:** Participatory - poster  
**Corresponding author:** No  
**City of event:** Puerto Varas, Chile  
**Date of event:** 02/12/2019  
**End date:** 06/12/2019  
**Organising entity:** LDSD 2019  
Robert Kudrawiec; Robert Oliva; Jan Kopaczek; Tomasz Wozniak.
- 14** **Title of the work:** Probing direct optical transitions of ReS<sub>2</sub> and ReSe<sub>2</sub> by means of high-pressure photoreflectance spectroscopy  
**Name of the conference:** 4th International Conference on Physics of 2 Dimensional Crystals (IC2DCP4 2019)  
**Type of participation:** Participatory - poster  
**Corresponding author:** Yes  
**City of event:** Hangzhou, China  
**Date of event:** 10/06/2019  
**End date:** 15/06/2019  
**Organising entity:** Mediterranean Institute of Fundamental Physics  
Robert Oliva.
- 15** **Title of the work:** Comparison of density functional theory methods in layered MS<sub>2</sub> compounds under compression  
**Name of the conference:** FLATLANDS beyond graphene 2019  
**Type of participation:** Participatory - oral communication  
**Corresponding author:** Yes  
**City of event:** Toulouse, France  
**Date of event:** 02/06/2019  
**End date:** 06/09/2019  
**Organising entity:** Radboud Universiteit  
Robert Oliva.
- 16** **Title of the work:** DFT methods compared for layered MS<sub>2</sub> compounds under compression  
**Name of the conference:** FLATLANDS beyond graphene 2019  
**Type of participation:** Participatory - poster  
**Corresponding author:** Yes  
**City of event:** Toulouse, France  
**Date of event:** 02/06/2019  
**End date:** 06/09/2019  
**Organising entity:** Radboud Universiteit  
Robert Oliva; Jordi Ibañez; Tomasz Wozniak; Filip Dybala; Sergi Hernandez; Robert Kudrawiec.
- 17** **Title of the work:** Probing the electronic band structure of MoTe<sub>2</sub> by means of photoreflectance under high pressure  
**Name of the conference:** European Materials Research society Spring Meeting 2019  
**Type of event:** Conference



**Type of participation:** Participatory - invited / keynote talk

**Corresponding author:** Yes

**City of event:** Nice, France

**Date of event:** 27/05/2019

**End date:** 31/05/2019

**Organising entity:** E-MRS

**City organizing entity:** Strasbourg, France  
Robert Oliva.

**Reasons for participation:** Upon invitation

**Type of entity:** Public Research Body

**18 Title of the work:** High-pressure optical properties of the weaklybonded ReS<sub>2</sub> and ReSe<sub>2</sub> transition metal dichalcogenides

**Name of the conference:** 2018 Energy Materials and Nanotechnology Barcelona Meeting (EMN2018)

**Type of event:** Conference

**Type of participation:** Participatory - invited / keynote talk

**Reasons for participation:** Upon invitation

**Corresponding author:** Yes

**City of event:** Barcelona, Cataluña, Spain

**Date of event:** 10/09/2018

**End date:** 14/09/2018

**Organising entity:** Open-Access House of Science and Technology

**Type of entity:** Associations and Groups

**City organizing entity:** Chengdu, China  
Robert Oliva.

**19 Title of the work:** InGaN band gap compositional dependence determined by means of photoacoustic spectroscopy

**Name of the conference:** International Symposium on Growth of III-Nitrides

**Corresponding author:** Yes

**City of event:** Warsaw, Poland

**Date of event:** 05/08/2018

**End date:** 10/08/2018

**Organising entity:** ISGN7 2018

**City organizing entity:** Warsaw, Poland

Robert Oliva; Szymon Zelewski; Lukasz Janicki; Katarzyna Gwozdz; Jan Serafinczuk; Mariusz Rudzinski; Ekmel Ozbay; Robert Kudrawiec.

**20 Title of the work:** Photorefectance spectroscopy of ReS<sub>2</sub> at high hydrostatic pressures

**Name of the conference:** 3rd International Conference on Physics of 2D Materials

**Corresponding author:** Yes

**City of event:** Malta, Malta, Malta

**Date of event:** 29/05/2018

**End date:** 02/06/2018

**Organising entity:** Mediterranean Institute of Fundamental Physics

**Type of entity:** Associations and Groups

Robert Oliva; Jan Kopaczek; Filip Dybala; Robert Kudrawiec.

**21 Title of the work:** Pressure dependence of direct optical transitions in layered ReS<sub>2</sub> and ReSe<sub>2</sub>

**Name of the conference:** 2018 Materials Research Society Spring Meeting

**Type of participation:** Participatory - poster

**Date of event:** 02/04/2018

**End date:** 06/04/2018



**Organising entity:** 2018 MRS

**City organizing entity:** Phoenix, United States of America

Magdalena Laurien; Robert Oliva; Filip Dybala; Jan Kopaczek; Ying Qin; Sefaatin Tongay; Oleg Rubel; Robert Kudrawiec.

- 22** **Title of the work:** High-pressure UV-Raman scattering of wide bandgap semiconductors: application to ZnO and Ga-rich InGaN  
**Name of the conference:** 52nd European High Pressure Research Group Meeting (EHPRG52)  
**Corresponding author:** Yes  
**City of event:** Lyon, Auvergne, France  
**Date of event:** 07/09/2014  
**End date:** 12/09/2014  
**Organising entity:** EHPRG52 **Type of entity:** State agency  
**City organizing entity:** Lyon, Auvergne, France  
R. Oliva; J. Ibáñez; R. Cuscó; A. Dadgar; A. Krost; L. Artús. "High-pressure UV-Raman scattering of wide bandgap semiconductors: application to ZnO and Ga-rich InGaN".
- 23** **Title of the work:** Pressure dependence of the refractive index in wurtzite and rocksalt InN  
**Name of the conference:** 52nd European High Pressure Research Group Meeting (EHPRG52)  
**Corresponding author:** Yes  
**City of event:** Lyon, Auvergne, France  
**Date of event:** 07/09/2014  
**End date:** 12/09/2014  
**Organising entity:** EHPRG52 **Type of entity:** State agency  
**City organizing entity:** Lyon, Auvergne, France  
Robert Oliva; Jordi Ibáñez; Alfredo Segura; Tomohiro Yamaguchi; Yasushi Nanishi; Lluís Artús. "Pressure dependence of the refractive index in wurtzite and rocksalt InN".
- 24** **Title of the work:** Brillouin Spectroscopy on InGaN: A Study on the Surface Acoustic Wave Velocities and Elastic Constants  
**Name of the conference:** International Workshop on Nitride Semiconductors (IWN 2014)  
**Corresponding author:** No  
**City of event:** Wrocław, Slaskie, Poland  
**Date of event:** 24/08/2014  
**End date:** 29/08/2014  
**Organising entity:** IWN 2014 **Type of entity:** Associations and Groups  
**City organizing entity:** Wrocław, Slaskie, Poland  
R. J. Jiménez Riobóo; N. Doménech-Amador; C. Prieto; R. Cuscó; R. Oliva; A. Bensaoula; J. Ibáñez; L. Artús. "Brillouin Spectroscopy on InGaN: A Study on the Surface Acoustic Wave Velocities and Elastic Constants".
- 25** **Title of the work:** Optical and vibrational high-pressure study of InGaN thin films grown on GaN and Si(111) substrates under high-pressure  
**Name of the conference:** VI Encuentro de Altas Presiones  
**Corresponding author:** Yes  
**City of event:** Oviedo, Asturias, Principado de, Spain  
**Date of event:** 20/05/2013  
**End date:** 24/05/2013  
**Organising entity:** MALTA **Type of entity:** State agency  
**City organizing entity:** Madrid, Madrid, Comunidad de, Spain  
R. Oliva; J. Ibáñez; L. Artús; A. Dadgar; A. Krost; C. Boney; A. Bensaoula. "Optical and vibrational high-pressure study of InGaN thin films grown on GaN and Si(111) substrates under high-pressure".



- 26** **Title of the work:** Optical and vibrational study of InGaN thin films grown on GaN and Si(111) substrates under high-pressure  
**Name of the conference:** VI Encuentro de Altas Presiones  
**Corresponding author:** Yes  
**City of event:** Oviedo, Asturias, Principado de, Spain  
**Date of event:** 20/05/2013  
**End date:** 24/05/2013  
**Organising entity:** MALTA **Type of entity:** State agency  
**City organizing entity:** Madrid, Madrid, Comunidad de, Spain  
R. Oliva; J. Ibáñez; L. Artús; A. Dadgar; A. Krost; C. Boney; A. Bensaoula. "Optical and vibrational study of InGaN thin films grown on GaN and Si(111) substrates under high-pressure".
- 27** **Title of the work:** High-pressure Raman scattering of CdO thin films grown by metal-organic vapour phase epitaxy  
**Name of the conference:** 15th International Conference on High Pressure Semiconductor Physics  
**Corresponding author:** Yes  
**City of event:** Montpellier, Languedoc-Roussillon, France  
**Date of event:** 25/07/2012  
**End date:** 17/07/2012  
**Organising entity:** HPSP **Type of entity:** State agency  
**City organizing entity:** Montpellier, Languedoc-Roussillon, France  
R. Oliva; J. Ibáñez; R. Cuscó; L. Artús; J. Zúñiga-Pérez; V. Muñoz-Sanjosé. "High-pressure Raman scattering of CdO thin films grown by metal-organic vapour phase epitaxy".
- 28** **Title of the work:** High-pressure optical and vibrational properties of InGaN/Si(111) grown by molecular beam epitaxy  
**Name of the conference:** 15th International Conference on High Pressure Semiconductor Physics  
**Corresponding author:** Yes  
**City of event:** Montpellier, Languedoc-Roussillon, France  
**Date of event:** 25/07/2012  
**End date:** 17/07/2012  
**Organising entity:** HPSP **Type of entity:** State agency  
**City organizing entity:** Montpellier, Languedoc-Roussillon, France  
R. Oliva; J. Ibáñez; L. Artús; A. Dadgar; A. Krost. "High-pressure optical and vibrational properties of InGaN/Si(111) grown by molecular beam epitaxy".
- 29** **Title of the work:** High-pressure Raman scattering in wurtzite and rock-salt indium nitride  
**Name of the conference:** V Encuentro de Altas Presiones  
**Corresponding author:** Yes  
**City of event:** La Laguna, Canarias, Spain  
**Date of event:** 27/06/2011  
**End date:** 01/07/2011  
**Organising entity:** VEAP - MALTA **Type of entity:** Associations and Groups  
**City organizing entity:** Madrid, Madrid, Comunidad de, Spain  
R. Oliva; J. Ibáñez; F. J. Manjón; A. Segura; R. Cuscó; R. Vilaplana; T. Yamaguchi; Y. Nanishi; L. Artús. "High-pressure Raman scattering in wurtzite and rock-salt indium nitride".
- 30** **Title of the work:** Structural and optical characterization of dilute InAsN thin films grown by molecular beam epitaxy  
**Name of the conference:** European Materials Research Society (E-MRS) Spring Meeting  
**Corresponding author:** No



**City of event:** Estrasburgo, Alsace, France

**Date of event:** 07/06/2010

**End date:** 11/06/2010

**Organising entity:** E-MRS

**Type of entity:** Associations and Groups

**City organizing entity:** Estrasburgo, Alsace, France

J. Ibáñez; M. Shafi; M. Henini; M. Schmidbauer; D. Scurr; R. Oliva; R. Cuscó; L. Artús; S. Hernández; P. Pellegrino; M. De la Mare; Q. Zhuang; A. Godenir; A. Krier. "Structural and optical characterization of dilute InAsN thin films grown by molecular beam epitaxy".

## Works presented at national or international seminars, workshops and/or courses

- 1 Title of the work:** Investigation of two-dimensional materials by means of optical and vibrational techniques under high-pressure conditions

**Name of the event:** Seminario invitado

**City of event:** Bilbao, Spain

**Date of event:** 25/01/2023

**End date:** 25/01/2023

**Organising entity:** Universidad del País Vasco

**Type of entity:** University

**City organizing entity:** Bilbao,  
Robert Oliva Vidal.
- 2 Title of the work:** Magnetic ordering on two dimensional materials: A high pressure study

**Name of the event:** Seminario invitado

**City of event:** Esch-sur-Alzette, Luxembourg

**Date of event:** 27/01/2021

**End date:** 27/01/2021

**Organising entity:** University of Luxembourg

**Type of entity:** University

**City organizing entity:** Esch-sur-Alzette,  
Robert Oliva Vidal.
- 3 Title of the work:** High pressure measurements on two dimensional materials

**Name of the event:** Presentation meeting

**Type of event:** Seminar

**City of event:** Esch-sur-Alzette, Luxembourg

**Date of event:** 09/09/2020

**End date:** 09/09/2020

**Organising entity:** University of Luxembourg

**Type of entity:** University

**City organizing entity:** Esch-sur-Alzette,  
Robert Oliva Vidal.
- 4 Title of the work:** Investigation of the optical properties of van der Waals crystals by means of high-pressure methods

**Name of the event:** Seminario invitado

**City of event:** Wroclaw, Poland

**Date of event:** 14/01/2020

**End date:** 14/01/2020

**Organising entity:** Politechnika Wroclawska

**Type of entity:** University

**City organizing entity:** Wroclaw,  
Robert Oliva Vidal.



- 5** **Title of the work:** Introduction to two-dimensional materials and their investigation under high-pressure methods  
**Name of the event:** Seminario invitado  
**City of event:** Varsovia, Poland  
**Date of event:** 05/11/2019  
**Organising entity:** UNIPRESS - Insitute of High-pressure Physics  
Robert Oliva.
- 6** **Title of the work:** Investigation of the In(Ga)N fundamental properties under high pressure  
**Name of the event:** Seminario invitado  
**Corresponding author:** Yes  
**City of event:** Varsovia, Poland  
**Date of event:** 16/08/2018  
**Organising entity:** UNIPRESS - Insitute of High-pressure Physics  
Robert Oliva.
- 7** **Title of the work:** Introduction to high-pressure Raman-scattering: application to InN and InGaN  
**Name of the event:** Seminario invitado  
**City of event:** Paris, France  
**Date of event:** 10/12/2014  
**End date:** 10/12/2014  
**Organising entity:** Université Pierre et Marie Curie   **Type of entity:** University  
**City organizing entity:** Paris,  
Robert Oliva Vidal.

## Science Outreach activities

- 1** **Title of the work:** Tècniques analítiques en Ciències de la Terra  
**Name of the event:** ESCOLAB  
**Type of event:** Fairs and exhibitions  
**Corresponding author:** Yes  
**City of event:** Barcelona, Cataluña, Spain  
**Date of event:** 19/01/2026  
**Organising entity:** Ajuntament de Barcelona   **Type of entity:** Ayuntamiento  
**City organizing entity:** Barcelona, Spain  
Robert Oliva Vidal; Jordi Ibáñez Insa; Mercè Cisneros; Abigail Jiménez Franco; Soledad Álvarez.
- 2** **Title of the work:** Workshop Paleoclima, Paleoecología y técnicas analíticas  
**Name of the event:** ESCOLAB  
**Type of event:** Fairs and exhibitions  
**City of event:** Barcelona, Cataluña, Spain  
**Date of event:** 10/04/2025  
**Organising entity:** Ajuntament de Barcelona   **Type of entity:** Ayuntamiento  
**City organizing entity:** Barcelona, Spain  
Robert Oliva Vidal; Jordi Ibáñez Insa; Abigail Franco; Encarnación Montoya; Santiago Giralt.
- 3** **Title of the work:** Taller en tècniques analítiques en Ciències de la Terra: roques i minerals, joies, canvi climàtic...  
**Name of the event:** ESCOLAB  
**Type of event:** Fairs and exhibitions



**Corresponding author:** Yes

**City of event:** Barcelona, Cataluña, Spain

**Date of event:** 31/01/2025

**Organising entity:** Ajuntament de Barcelona

**Type of entity:** Ayuntamiento

**City organizing entity:** Barcelona, Spain

Robert Oliva Vidal; Jordi Ibáñez Insa; Abigail Franco; Mercè Cisneros; Soledad Álvarez.

**4 Title of the work:** Taller en tècniques analítiques en Ciències de la Terra

**Name of the event:** ESCOLAB

**Type of event:** Fairs and exhibitions

**Corresponding author:** Yes

**City of event:** Barcelona, Cataluña, Spain

**Date of event:** 07/02/2024

**Organising entity:** Ajuntament de Barcelona

**Type of entity:** Ayuntamiento

**City organizing entity:** Barcelona, Spain

Jordi Ibáñez Insa; Robert Oliva Vidal; Santiago Giralt.

**5 Title of the work:** Ciència d'altres pressions en cristalls

**Name of the event:** Trobades científiques

**Type of event:** Conferences given

**City of event:** Barcelona, Spain

**Date of event:** 10/02/2023

**Organising entity:** geo3bcn-CSIC

**Type of entity:** Public Research Body

**City organizing entity:** Barcelona, Spain

**6 Title of the work:** facebook page "Popular Physics" 3,196 followers, 22,000 people publication scope

**Type of event:** Educational website

**City of event:** United States of America

**Date of event:** 04/06/2021

Available on-line at: <<https://www.facebook.com/CoolPhyscs>>.

**7 Title of the work:** Optical and vibrational properties of InN and InGaN under high pressure

**Name of the event:** Seminarium Zaawansowane Metody Badania Półprzewodników

**Type of event:** Conferences given

**Reasons for participation:** Upon invitation

**Corresponding author:** Yes

**City of event:** Wroclaw, Poland

**Date of event:** 20/03/2018

**Organising entity:** Wroclaw University of Science and Technology

Robert Oliva Vidal.

**8 Title of the work:** There's plenty of room under pressure!

**Name of the event:** 3rd Jornada d'Investigadors Predoctorals Interdisciplinaria

**Type of event:** Conferences given

**City of event:** Barcelona, Cataluña, Spain

**Date of event:** 05/02/2015

**Organising entity:** JIPI

**Type of entity:** Associations and Groups

**9 Title of the work:** Espai Ciencia

**Name of the event:** Saló de l'Ensenyament

**Type of event:** Fairs and exhibitions



**Corresponding author:** Yes  
**City of event:** Barcelona, Cataluña, Spain  
**Date of event:** 15/03/2014  
**Organising entity:** Institute of Earth Sciences Jaume Almera (ICTJA-CSIC)

**10 Title of the work:** ICTJA Student Presentation Award 2013  
**Name of the event:** Student Presentation Award  
**Type of event:** Certámen  
**Date of event:** 19/12/2013  
**Organising entity:** Institute of Earth Sciences Jaume Almera (ICTJA-CSIC)

**11 Title of the work:** An introduction to high pressure in Sciences  
**Name of the event:** Pecha Kucha  
**Type of event:** Conferences given  
**City of event:** Barcelona, Cataluña, Spain  
**Date of event:** 20/11/2013  
**Organising entity:** University of Barcelona      **Type of entity:** University

**12 Title of the work:** Que investiguem a les Ciències de la Terra?  
**Name of the event:** Tallers de Recerca per estudiants d'Ensenyament Secundari i Batxillerat  
**Type of event:** Fairs and exhibitions  
**Corresponding author:** Yes  
**City of event:** Barcelona, Cataluña, Spain  
**Date of event:** 18/11/2013  
**Organising entity:** Institute of Earth Sciences Jaume Almera (ICTJA-CSIC)

**13 Title of the work:** Working under pressure  
**Name of the event:** 1st Flash Talks Meeting of PhD  
**Type of event:** Conferences given  
**Corresponding author:** Yes  
**City of event:** Barcelona, Cataluña, Spain  
**Date of event:** 19/01/2012  
**Organising entity:** University of Barcelona      **Type of entity:** University  
**City organizing entity:** Barcelona, Cataluña, Spain  
 Robert Oliva.

## R&D management and participation in scientific committees

### Scientific, technical and/or assessment committees

**Committee title:** Experto Evaluador de proyectos de Investigación y Desarrollo e Innovación Tecnológica  
**Primary (UNESCO code):** 220212 - X-rays; 221124 - Optical properties; 221125 - Semiconductors; 221191 - Solid state Physics. Spectroscopy of solid; 230117 - Raman spectroscopy  
**Secondary (UNESCO code):** 220914 - Optical properties of solids; 220921 - Spectroscopy  
**Affiliation entity:** European Quality Assurance España (EQA) - Acreditada por la ENTIDAD NACIONAL DE ACREDITACIÓN (ENAC)  
**City affiliation entity:** España, Madrid, Comunidad de, Spain  
**Start date:** 2024



## Organization of R&D activities

- Title of the activity:** 38th International Symposium on the Dynamical Properties of Solids  
**Type of activity:** Member of the Organisation Committee  
**Geographical area:** European Union  
**Convening entity:** DyProSo  
**Type of entity:** Associations and Groups  
**City convening entity:** Luxembourg, Luxembourg  
**Start-End date:** 06/09/2021 - 08/09/2021
- Title of the activity:** Session: General VIII  
**Type of activity:** Invited chair of plenary session  
**Geographical area:** European Union  
**Convening entity:** International Conference on Energy, Materials and Nanotechnology EMN Barcelona Meeting 2018  
**City convening entity:** Barcelona, Cataluña, Spain  
**Start-End date:** 12/09/2018 - 12/09/2018  
**Duration:** 1 day

## R&D management

- Name of the activity:** Crystal physics, mineralogy and high pressure - Research team (geo3bcn-CSIC)  
**Type of management:** Group management  
**Performed tasks:** Coordinator  
**Entity:** Geociencias Barcelona (geo3bcn-CSIC)  
**Type of entity:** Public Research Body  
**Start date:** 21/06/2023  
**Duration:** 2 years - 6 months
- Name of the activity:** Servicio y Laboratorio de Espectroscopia Raman, Fotoluminiscencia y de Métodos Espectrales e Hiperespectrales  
**Type of management:** Servicios Científico-Técnico  
**Performed tasks:** Responsable de Prestación de Servicios Científico-Técnicos a empresas externas y OPIs. Además, Corresponsable científico del Laboratorio Hiperespectral.  
**City of entity:** Barcelona, Spain  
**Entity:** Geociencias Barcelona - Consejo Superior de Investigaciones Científicas  
**Type of entity:** Public Research Body  
**Start date:** 20/03/2023  
**Duration:** 2 years - 10 months  
**Access system:** With or without publicity for the decision  
**Average annual budget:** 2.958,38  
**Nº of people:** 3  
**Aims of the event:** <https://www.csic.es/en/investigacion/catalogo-de-servicios-cientifico-tecnico/servicios/spectral-reflectance-regular-or-specular-materials>  
**Specific tasks:** Desde su creación ha tenido una facturación de 7.889,29 €.  
**Identify key words:** Optical Image Processing



## National and international forums and committees

- 1 Name of the forum:** Comité de Igualdad  
**Professional category:** Doctor (personal laboral fijo)  
**Organising entity:** geo3bcn-CSIC **Type of entity:** Associations and Groups  
**City organizing entity:** Barcelona, Spain  
**Start date:** 22/01/2026
- 2 Name of the forum:** Comité Professional Development and Workplace Well-being Committee (PDWWC)  
**Professional category:** Doctor (personal laboral fijo)  
**Organising entity:** geo3bcn-CSIC **Type of entity:** Associations and Groups  
**City organizing entity:** Barcelona, Spain  
**Start date:** 09/09/2025

## Evaluation and revision of R&D projects and articles

- 1 Name of the activity:** Evaluador para SEKUENS  
**Performed tasks:** Evaluador Experto de proyecto referencia EQA IDE/2025/000971 por valor de 82,500€  
**Entity where activity was carried out:** External quality assessment (EQA)  
**City of entity:** Spain  
**Start-End date:** 17/11/2025 - 30/11/2025
- 2 Name of the activity:** Reviewer, SOURCE-WORK-ID: 9ccb5efe-72d2-4005-ab46-6b4303b6e0d8  
**Performed tasks:** Review of articles in scientific or technological journals ISSN: 1862-6270  
**Entity where activity was carried out:** Physica Status Solidi - Rapid Research Letters at Wiley  
**City of entity:** Online, Berlin, Germany  
**Start-End date:** 2023 - 2023
- 3 Name of the activity:** Reviewer, OTHER-ID: ACS-23-39591899  
**Performed tasks:** Review of articles in scientific or technological journals ISSN: 1932-7455  
**Entity where activity was carried out:** Review of articles in scientific or technological journal, Journal of Physical Chemistry C  
**City of entity:** Online, United States of America  
**Start-End date:** 2023 - 2023
- 4 Name of the activity:** Reviewer  
**Performed tasks:** Review of articles in scientific or technological journals ISSN: 1948-7185  
**Entity where activity was carried out:** journal, **Type of entity:** American Chemical Society  
Journal of Physical Chemistry Letters  
**City of entity:** Online, United States of America  
**Start-End date:** 2023 - 2023
- 5 Name of the activity:** Reviewer  
**Performed tasks:** Review of articles in scientific or technological journals  
**Entity where activity was carried out:** Journal of Applied Physics  
**City of entity:** London, Inner London, United Kingdom  
**Start-End date:** 28/06/2020 - 31/08/2020



- 6 Name of the activity:** Reviewer  
**Performed tasks:** Review of articles in scientific or technological journals  
**Entity where activity was carried out:** Minerals  
**City of entity:** London, Inner London, United Kingdom  
**Start-End date:** 12/02/2019 - 01/07/2019
- 7 Name of the activity:** Reviewer  
**Performed tasks:** Review of articles in scientific or technological journals  
**Entity where activity was carried out:** Journal: **Type of entity:** Peer-reviewed Journal  
Journal of Physics: Condensed Matter  
**City of entity:** London, Inner London, United Kingdom  
**Start-End date:** 06/07/2018 - 11/08/2018
- 8 Name of the activity:** Reviewer  
**Performed tasks:** Review of articles in scientific or technological journals  
**Entity where activity was carried out:** Applied **Type of entity:** peer-review journal  
Surface Science  
**City of entity:** Amsterdam, Noord-Holland, Holland  
**Start-End date:** 23/06/2018 - 03/07/2018
- 9 Name of the activity:** Reviewer  
**Performed tasks:** Review of articles in scientific or technological journals  
**Entity where activity was carried out:** ACS Applied Materials & Interfaces  
**City of entity:** London, Inner London, United Kingdom  
**Start-End date:** 28/03/2019 - 18/06/2018
- 10 Name of the activity:** Reviewer  
**Performed tasks:** Review of articles in scientific or technological journals  
**Entity where activity was carried out:** Materials **Type of entity:** peer-review journal  
Research Express  
**City of entity:** London, Inner London, United Kingdom  
**Start-End date:** 05/04/2018 - 06/04/2018

## Other achievements

### Stays in public or private R&D centres

- 1 Entity:** Universidad de La Laguna **Type of entity:** University  
**Faculty, institute or centre:** Facultad de Ciencias  
**City of entity:** La Laguna, Canarias, Spain  
**Start-End date:** 10/07/2023 - 14/07/2023 **Duration:** 4 days  
**Goals of the stay:** Guest  
**Provable tasks:** Medidas de difracción de rayos X para monocristal (single-crystal c-ray diffraction)  
**Type of stay:** Investigación
- 2 Entity:** Institut de Minéralogie et Physique des Milieux Condensés **Type of entity:** University  
**Faculty, institute or centre:** Université Pierre et Marie Curie  
**City of entity:** París, Île de France, France

**Start-End date:** 01/09/2014 - 01/01/2015**Duration:** 4 months**Goals of the stay:** Estancias breves de doctorado**Provable tasks:** Espectroscopía Brillouin**3 Entity:** Universitat de València**Type of entity:** University**Faculty, institute or centre:** Facultad de Física**City of entity:** Burjassot, Comunitat Valenciana, Spain**Start-End date:** 03/05/2013 - 03/08/2013**Duration:** 3 months**Goals of the stay:** Estancias breves de doctorado**Provable tasks:** Absorción óptica de InN

### Obtained grants and scholarships

**Name of the grant:** Formación de Personal Investigador**Aims:** Pre-doctoral**Awarding entity:** Ministerio de Economía, Industria y Competitividad, Spain**Conferral date:** 01/01/2012**Duration:** 4 years**End date:** 01/01/2016**Entity where activity was carried out:** Consejo Superior de Investigaciones Científicas**Faculty, institute or centre:** Instituto de Ciencias de la Tierra Jaume Almera, Barcelona

### Other types of collaboration with researchers or technologists

**Type of relationship:** Joint project networks**Description of the collaboration:** MALTA Consolider Team**Start date:** 01/01/2023**Duration:** 1 year

### Co-operation networks

**1 Name of the network:** Multi-sensory and multi-scale Earth Observation - Equipo de trabajo**Identification of the network:** MMimas-geo3bcn-CSIC**Start date:** 30/05/2025**Duration:** 7 months**2 Name of the network:** Mineral and Fluid Systems - Equipo de trabajo**Identification of the network:** MFS-geo3bcn-CSIC**Start date:** 23/05/2025**Duration:** 8 months**3 Name of the network:** Xarxa H2cat**Start date:** 03/06/2024**Duration:** 1 year - 6 months - 1 day**4 Name of the network:** Mineral Resources Research Group - IN2UB**Identification of the network:** NanoMet**Start date:** 12/09/2023**Duration:** 2 years - 4 months**5 Name of the network:** Georisks and Global Change - GLOBE**Identification of the network:** 2021 SGR 00411 (AGAUR-Suport a Grups de Recerca)**Start date:** 28/04/2022**Duration:** 3 years



## Obtained accreditations/recognitions

- 1** **Description:** Inscrito en el curso "IGUALDAD DE GÉNERO 1a edición"  
**Accrediting entity:** Ministerio de Ciencia e Innovación. Universidades - CSIC **Type of entity:** State agency  
**City accrediting entity:** On line,  
**Date of recognition:** 22/05/2026
- 2** **Description:** Manejo de Sistema de Medidas de Muestras Geológicas de Hypspec y Análisis de Imágenes Hiperespectrales  
**Accrediting entity:** Gobierno de España - CSIC **Type of entity:** State agency  
- Acuerdo de Formación para el Empleo de las Administraciones Públicas  
**City accrediting entity:** Madrid, Spain  
**Date of recognition:** 26/04/2024
- 3** **Description:** Nociones básicas sobre Prevención de Riesgos Laborales en el CSIC  
**Accrediting entity:** Ministerio de Ciencia e Innovación - CSIC  
**City accrediting entity:** Madrid, Spain  
**Date of recognition:** 28/10/2023
- 4** **Description:** Riesgos Generales en Laboratorio  
**Accrediting entity:** Ministerio de Ciencia e Innovación - CSIC  
**City accrediting entity:** Madrid, Spain  
**Date of recognition:** 28/10/2023
- 5** **Description:** Riesgos asociados al trabajo con Pantallas de Visualización de Datos  
**Accrediting entity:** Ministerio de Ciencia e Innovación - CSIC **Type of entity:** State agency  
**City accrediting entity:** Madrid, Spain  
**Date of recognition:** 28/10/2023
- 6** **Description:** Nociones básicas sobre Prevención de Riesgos Laborales frente a Riesgo Químico  
**Accrediting entity:** Ministerio de Ciencia e Innovación - CSIC  
**City accrediting entity:** Madrid, Spain  
**Date of recognition:** 27/10/2023
- 7** **Description:** Conducció vehicles tot terreny N1 formació geo3bcn-CSIC  
**Accrediting entity:** FAST ENGINYERIA, S.L. **Type of entity:** Business  
**City accrediting entity:** Castellolí, Spain  
**Date of recognition:** 02/10/2023
- 8** **Description:** Formación Psicoemocional  
**Accrediting entity:** ASPY Prevención **Type of entity:** Foundation  
**City accrediting entity:** Barcelona, Cataluña, Spain  
**Date of recognition:** 23/08/2023



- 9** **Description:** Iniciación a la Programación en Python  
**Accrediting entity:** Gobierno de España - CSIC - Acuerdo de Formación para el Empleo de las Administraciones Públicas  
**Type of entity:** State agency  
**Date of recognition:** 03/07/2023
- 10** **Description:** Técnicas de Machine Learning basadas en árboles para Investigación Científica con R  
**Accrediting entity:** Museo Nacional de Ciencias Naturales  
**Type of entity:** State agency  
**City accrediting entity:** Madrid, Madrid, Comunidad de, Spain  
**Date of recognition:** 11/11/2022
- 11** **Description:** Riesgo en radiaciones ionizantes, prevención y control en los centros del CSIC  
**Accrediting entity:** Ministerio de Ciencia e Innovación - CSIC  
**City accrediting entity:** Madrid, Spain  
**Date of recognition:** 21/06/2022
- 12** **Description:** Machine Learning course - Stanford University  
**Accrediting entity:** coursera  
**City accrediting entity:** Stanford, United States of America  
**Date of recognition:** 09/12/2019
- 13** **Description:** Training Programme - Management  
**Accrediting entity:** Vitae Training Programme  
**City accrediting entity:** Warsaw,  
**Date of recognition:** 28/06/2019
- 14** **Description:** Training Programme - Personal Effectiveness  
**Accrediting entity:** Vitae Training Programme  
**City accrediting entity:** Warsaw,  
**Date of recognition:** 28/06/2019
- 15** **Description:** Training Programme - Intellectual property  
**Accrediting entity:** Vitae Training Programme  
**City accrediting entity:** Warsaw,  
**Date of recognition:** 11/04/2018
- 16** **Description:** Workshop on Advanced Raman Spectroscopy  
**Accrediting entity:** University of Barcelona  
**Type of entity:** University  
**City accrediting entity:** Barcelona, Cataluña, Spain  
**Date of recognition:** 08/04/2014
- 17** **Description:** VI High-pressure School  
**Accrediting entity:** Escuela de Altas Presiones - MALTA Consolider Team  
**City accrediting entity:** Oviedo, Spain  
**Date of recognition:** 24/05/2013
- 18** **Description:** Curso Teorico-Practico de Difraccion de Rayos X en polvo  
**Accrediting entity:** Institute of Earth Science Jaume Almera  
**Type of entity:** R&D Centre  
**Date of recognition:** 15/07/2012



- 19** **Description:** Quantum Dot Based Single Photon Sources for Quantum Cryptography  
**Accrediting entity:** University of Barcelona **Type of entity:** University  
**City accrediting entity:** Barcelona, Cataluña, Spain  
**Date of recognition:** 29/04/2011