CURRÍCULUM VÍTAE NORMALIZADO

Robert Oliva Vidal

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GOBIERNO DE ESPAÑA
MINISTERIO DE CIENCIA E INNOVACIÓN

FECYT FUNDACIÓN ESPAÑOLA PARA LA CIENCIA Y LA TECNOLOGÍA

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.

Main quality indicators

I have published **20 international peer-reviewed scientific articles** indexed in the ISI-WOK (**10 of which as first author** and 5 of which as corresponding author), **11 of them are in the 1st Quartile (Q1)** of all their respective areas in the moment of their publication. I performed one invited talk in an international conference and chaired one session. I have been granted a highly competitive project (Polonez 3) project under the Marie Skłodowska-Curie agreement No 665778. The project has a total estimated budget of 1,844,176 PLN equivalent to 196,320 EUR. The total amount of citations I received is 167 and my **h-factor is over 10** as recognized by the International Scientific Index - Web of Knowledge. I have over a dozen participations in congresses and 7 dissemination activities.

Relevant aspects

I would like to note that **my fields of expertise are highly adequate for the activities I will develop in the R+D center**. As it can be seen from my publications, these include the use of several different spectroscopic techniques for the study of the optical, structural, electrical and vibrational properties of crystals. Next I include a selected list of studies using structural (Raman and XRD) and reflectance spectroscopic techniques in the IR - UV range.

1- R. Oliva et al. Pressure dependence of direct optical transitions in ReS2 and ReSe2. npj 2D Materials and Applications **3**, 20 (2019). I am first and corresponding author of this work, which has been published in a high-impact factor journal (i.e. 9.3). This work is highly relevant in the present position because we used a reflectance spectroscopic techniques (modulated photoreflectance) to investigate the optical properties on a soft mineral, rheniite, both at room conditions and under high hydrostatic pressures such as those found in the upper mantle of the Earth. I participated in all stages of the article, from sample acquisition to the writing of the manuscript. The present work allowed to understand the underlying physical mechanisms that govern the electronic bandstructure in these two-dimensional materials upon compression.

2- R. Oliva et al. Hidden spin-polarized bands in semiconducting 2H-MoTe2. I am first author and corresponding author of this work published in a high-impact factor journal (i.e. 7.44). This work is highly relevant because we experimentally confirmed the presence

of spin-polarized bands in semiconducting two-dimensional materials combining high-pressure reflectance spectroscopic measurements (modulated photoreflectance) with novel first-principle calculations. The spin-polarized bands were experimentally measured for the first time after their recent theoretical prediction (Nat Phys. 2014 10:387–393).

3- J. Ibáñez et al. Structural and Lattice-Dynamical Properties of Tb2O3 under Compression: A Comparative Study with Rare Earth and Related Sesquioxides: I am corresponding author of this work, done in collaboration with the GEO3BCN research center. This work allowed to understand the phase transition sequence in Tb2O3 and other cubic rare earth sesquioxides. Trends in the Bulk moduli, phase transition sequence, and volume were discussed in terms of the ionic radii of the cations.

4- J. Ibáñez et al. Structural and High-Pressure Properties of Rheniite (ReS2) and (Re,Mo)S2: This work, published in the journal Minerals, allowed to reevaluate the phase transition upon hydrostatic pressure and report the equation of state of rheniite .

Robert Oliva Vidal

Surname(s): **Oliva Vidal**
Name: **Robert**
ORCID: **0000-0002-9378-4048**
Contact aut. region/reg.: **Catalonia**

Current professional situation

Employing entity: Consejo Superior de Investigaciones Científicas
Type of entity: State agency
Department: Geociencias Barcelona
Professional category: Contratado doctor
Start date: 01/09/2022
Type of contract: Permanent employment contract
Dedication regime: Full time

Previous positions and activities

	Employing entity	Professional category	Start date
1	University of Luxembourg	post-doc	01/09/2020
2	Wroclaw University of Science and Technology - Opus11	Lecturer	01/12/2019
3	Narodowe Centrum Nauki - HORIZON 2020 - Marie Sklodowska-Curie actions City employing entity: Wroclaw Country employing entity: Poland	Assistant professor	01/12/2017
4	Wroclaw University of Science and Technology - Opus11	Lecturer	01/07/2017
5	Ministerio de Economía, Industria y Competitividad - FPI contract	PhD student	02/01/2014
6	Ministerio de Economía, Industria y Competitividad - FPI fellowship	PhD student	01/01/2012
7	Ministerio de economía, industria y competitividad	Investigador contratado	18/04/2011
8	Ministerio de industria, economía y competitividad	Investigador contratado	13/01/2010

1 **Employing entity:** University of Luxembourg
Type of entity: University
Professional category: post-doc
Start-End date: 01/09/2020 - 31/08/2022
Duration: 2 years
Type of contract: Temporary

2 **Employing entity:** Wroclaw University of Science and Technology - Opus11
Professional category: Lecturer **Educational Management (Yes/No):** No
Start-End date: 01/12/2019 - 31/08/2020 **Duration:** 5 months
Type of contract: Grant-assisted student (pre or post-doctoral, others)
Field of management activity: General State Administration

3 **Employing entity:** Narodowe Centrum Nauki - HORIZON 2020 - Marie Sklodowska-Curie actions City employing entity: Wroclaw Country employing entity: Poland **Type of entity:** University
Professional category: Assistant professor
Start-End date: 01/12/2017 - 30/12/2019 **Duration:** 2 years

4 **Employing entity:** Wroclaw University of Science and Technology - Opus11
Professional category: Lecturer **Educational Management (Yes/No):** No
Start-End date: 01/07/2017 - 30/11/2017 **Duration:** 5 months
Type of contract: Grant-assisted student (pre or post-doctoral, others)
Field of management activity: General State Administration

5 **Employing entity:** Ministerio de Economía, Industria y Competitividad - FPI contract
Department: Crystallography and Optical Properties, Insitute of Earth Sciences Terra Jaume Almera
Professional category: PhD student
Start-End date: 02/01/2014 - 01/01/2016 **Duration:** 4 years
Type of contract: Grant-assisted student (pre or post-doctoral, others)
Dedication regime: Full time

6 **Employing entity:** Ministerio de Economía, Industria y Competitividad - FPI fellowship
Department: Crystallography and Optical Properties, Insitute of Earth Sciences Terra Jaume Almera
Professional category: PhD student
Start-End date: 01/01/2012 - 01/01/2014 **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 **Type of entity:** State agency
Professional category: Investigador contratado
Start-End date: 18/04/2011 - 17/09/2011 **Duration:** 4 months - 28 days

8 **Employing entity:** Ministerio de industria, economía y competitividad **Type of entity:** State agency
Professional category: Investigador contratado
Start-End date: 13/01/2010 - 31/03/2011 **Duration:** 7 months - 1 day

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:** Intellectual property
Goals of the course/seminar: Information literacy, Risk management, Public Engagement and Income and funding generation
Organising entity: Vitae POLONEZ Training Programme - National Science Centre **Type of entity:** Associations and Groups
Faculty, institute or centre: National Science Centre (NCN) Poland
Duration in hours: 15 hours
Start-End date: 03/11/2018 - 04/11/2018

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:** Escuela de Altas Presiones
University degree: Master
Start date: 30/08/2021
End date: 10/09/2021
Entity: Universitat Politecnica de Valencia
Type of entity: University

2 **Type of teaching:** Official teaching
Name of the course: Physics
Type of programme: Engineering
Type of subject: Optional
University degree: Engineer
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

3 **Type of teaching:** Official teaching
Name of the course: Physics 3.1
Type of programme: Engineering
University degree: Engineer
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

4 **Type of teaching:** Official teaching
Name of the course: Physics
Type of programme: Engineering
Type of subject: Optional
University degree: Engineer
Course given: Fisica
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

Project title: thesis external evaluation, title of the thesis: Estudio de compuestos As2X3 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 Politecnica de Valencia **Type of entity:** University
City of entity: Valencia, Valencian Community, Spain
Student: Vanesa Paula Cuenca Gotor
Date of reading: 17/06/2019

Other activities/achievements not included above

Description of the activity: Teacher of mathematics and natural sciences during one semester
City of activity: Barcelona, Catalonia, Spain
Organising entity: Institucio Pedagogica Sant Isidor (IPSI)
End date: 25/06/2017

Scientific and technological experience

Scientific or technological activities

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

1 **Name of the project:** Polonez3
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

2 **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....): J. Ibáñez; R. Oliva; C. A. Popescu
Nº of researchers: 3
Start date: 22/05/2019

3 **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, Catalonia, Spain
Name principal investigator (PI, Co-PI....): Lluis Artus Surroca; Ramon Cusco; Jordi Ibáñez Insa
Nº of researchers: 3
Start date: 18/04/2011
Applicant's contribution: PhD student

4 **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....): Lluis Artus Surroca; Ramon Cusco; Jordi Ibáñez Insa
Nº of researchers: 3
Start date: 13/01/2010
Applicant's contribution: PhD student

5 **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 Vidal
Nº of researchers: 1
Start date: 01/01/2010 **Duration:** 4 years

Dedication regime: Full time
Applicant's contribution: PhD student

Scientific and technological activities

Scientific production

H index: 10
Date of application: 04/06/2021
Fuente de Indice H: WOS

Publications, scientific and technical documents

1 R. Oliva; T. Wozniak; F. Dybala; J. Kopaczek; P. Scharoch; Robert Kudrawiec. Hidden spin-polarized bands in semiconducting 2H-MoTe2. Materials Research Letters. 8, pp. 75 - 81. Taylor & Francis, 15/12/2019.

Type of production: Scientific paper
Format: Journal
Corresponding author: Yes
Impact source: ISI
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
Relevant publication: Yes

2 R. Oliva; M. Laurien; F. Dybala; J. Kopaczek; Y. Quin; S. Tongay; O. Rubel; R. Kudrawiec. Pressure dependence of direct optical transitions in ReS2 and ReSe2. npj 2D Materials and Applications. 3, pp. 20. Nature, 08/05/2019.

Type of production: Scientific paper
Format: Scientific and technical document or report
Corresponding author: Yes
Impact source: ISI
Category: Materials Science (miscellaneous)
Impact index in year of publication: 9.338
Journal in the top 25%: Yes
Relevant publication: Yes

3 J. Ibáñez; T. Wozniak; F. Dybala; R. Oliva; S. Hernández; R. Kudrawiec. High-pressure Raman scattering in bulk HfS2: comparison of density functional theory methods in layered MS2 compounds (M = Hf, Mo) under compression. Scientific Reports. 8, pp. 12757 - 12767. Nature Publishing Group, 24/08/2018.

Type of production: Scientific paper
Format: Journal
Corresponding author: Yes
Impact source: ISI
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
Relevant publication: Yes

4 R. Oliva; A. Segura; J. Ibáñez; T. Yamaguchi; Y. 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.

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: ISI
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: 8
Relevant publication: Yes

5 J. Ibáñez; R. Oliva; F. J. Manjón; A. Segura; T. Yamaguchi; Y. Nanishi; R. Cuscó; L. 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
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: 8
Impact source: ISI
Category: Science Edition - PHYSICS, CONDENSED MATTER
Impact index in year of publication: 3.513
Source of citations: WOS
Citations: 10
Relevant publication: Yes

6 R. Oliva; J. Ibáñez; L. Artús; R. Cuscó; J. Zúñiga-Pérez; V. 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
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
Impact source: ISI
Category: Science Edition - PHYSICS, APPLIED
Impact index in year of publication: 2.126
Source of citations: WOS
Citations: 12
Relevant publication: Yes

7 R. Oliva; J. Ibáñez; R. Cuscó; R. Kudrawiec; J. Serafinczuk; O. Martínez; J. Jiménez; M. Henini; C. Boney; A. Bensaoula; L. Artús. Raman scattering by the E2h and A1(LO) phonons of InxGa1-xN 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
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: 11
Impact source: ISI
Category: Science Edition - PHYSICS, APPLIED
Impact index in year of publication: 2.126
Source of citations: WOS
Citations: 15
Relevant publication: Yes

8 Robert Oliva Vidal; 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 BaZrO3 under high pressure. Physical review B. 106 - 064105, APS, 16/08/2022.
Type of production: Scientific paper **Format:** Journal
Corresponding author: No
Impact source: ISI
Impact index in year of publication: 4.036
Relevant publication: No

9 Oliva; Wozniak; Faria Jr.; Dybala; Kopaczek; Fabian; Scharoch; Kudrawiec. Strong Substrate Strain Effects in Multilayered WS2 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

10 J. Ibáñez-Insa; T. Woźniak; R. Oliva; C. Popescu; S. Hernández; J. López-Vidrier. Minerals. Structural and High-Pressure Properties of Rheniite (ReS2) and (Re,Mo)S2. 11 - 207, MDPI, 16/02/2021.
Type of production: Scientific paper **Format:** Journal
Corresponding author: No
Impact source: https://www.mdpi.com/journal/minerals
Impact index in year of publication: 2.572

11 A. Tolloczko; R. Oliva; T. Wozniak; J. Kopaczek; P. Scharoch; Robert Kudrawiec. Anisotropic optical properties of GeS investigated by optical absorption and photoreflectance. Material Advances. 1 - 1886, pp. 1886 - 1894. 14/08/2020.
DOI: 10.1103/PhysRevB.101.235205
Type of production: Scientific paper **Format:** Journal
Corresponding author: No
Impact source: ISI
Impact index in year of publication: 3.575

12 J. Ibáñez; J. A. Sans; V. Cuenca-Gotor; R. Oliva; O. Gomis; P. Rodríguez-Hernández; A. Muñoz; U. Rodríguez-Mendoza; M. Velázquez; P. Veber; C. Popescu; F. J. Manjón. Structural and Lattice-Dynamical Properties of Tb2O3 under Compression: A Comparative Study with Rare Earth and Related Sesquioxides. Inorganic Chemistry. 59 - 9648, pp. 9648 - 9666. 20/07/2020.
Type of production: Scientific paper **Format:** Journal
Corresponding author: Yes
Impact source: ISI **Category:** Inorganic Chemistry
Impact index in year of publication: 4.825 **Journal in the top 25%:** Yes

13 R. Oliva; T. Wozniak; F. Dybala; A. Tolloczko; J. Kopaczek; P. Scharoch; R. 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
Corresponding author: Yes
Impact source: ISI
Impact index in year of publication: 3.575

14 M. A. Antoniak; S. J. Zelewski; R. Oliva; A. Żak; R. Kudrawiec; M. Nyk. Combined Temperature and Pressure Sensing Using Luminescent NaBiF4: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

15 R. Oliva; S. J. Zelewsk; L. Janicki; K. R. Gwózdz; J. Serafinczuk; M. Rudzinski; E. Özbay; R. 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.

Type of production: Scientific paper
Format: Journal
Corresponding author: Yes
Impact source: ISI
Category: Science Edition - MATERIALS SCIENCE, MULTIDISCIPLINARY
Impact index in year of publication: 2.28

16 R. Oliva; J. Ibáñez; R. Cuscó; A. Dadgar; A. Krost; Gandhi, J.; Bensaoula, A.; Artús, L.. 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
Degree of contribution: Author or co-author of article in journal with external admissions assessment committee
Total no. authors: 8
Impact source: ISI
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

17 R. J. Jiménez-Riobóo; R. Cuscó; R. Oliva; N. Domènech-Amador; C. Prieto; J. Ibáñez; C. Boney; A. Bensaoula; L. 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
Format: Journal
Position of signature: 3
Degree of contribution: Author or co-author of article in journal with external admissions assessment committee
Total no. authors: 9
Impact source: ISI
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: 5

18 J. Ibáñez; A. Segura; B. García-Domene; R. Oliva; F. J. Manjón; T. Yamaguchi; Y. Nanishi; L. 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
Format: Journal
Position of signature: 4
Degree of contribution: Author or co-author of article in journal with external admissions assessment committee

Total no. authors: 8

Impact source: ISI

Category: Science Edition - PHYSICS, CONDENSED MATTER

Impact index in year of publication: 3.513

Source of citations: WOS

Citations: 3

19 J. Ibáñez; A. Rapaport; C. Boney; R. Oliva; R. Cuscó; A. Bensaoula; A. Artús. Raman scattering by folded acoustic phonons in InGaN/GaN 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

Format: Journal

Position of signature: 4

Degree of contribution: Author or co-author of article in journal with external admissions assessment committee

Total no. authors: 7

Impact source: ISI

Category: Spectroscopy

Impact index in year of publication: 2.306

Journal in the top 25%: Yes

Position of publication: 8

No. of journals in the cat.: 43

Source of citations: WOS

Citations: 10

20 J. Ibáñez; F. J. Manjón; A. Segura; R. Oliva; R. Cuscó; R. Vilaplana; T. Yamaguchi; Y. Nanishi; L. 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

Format: Journal

Position of signature: 4

Degree of contribution: Author or co-author of article in journal with external admissions assessment committee

Total no. authors: 9

Impact source: ISI

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: 13

21 J. Ibáñez; R. Oliva; M. De la Mare; M. Schmidbauer; S. Hernández; P. Pellegrino; D. J. Scurr; R. Cuscó; L. Artús; M. Shafi; R. H. Mari; M. Henini; Q. Zhuang; A. Godenir; A. 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>.

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

Impact source: ISI

Category: Science Edition - PHYSICS, APPLIED

Impact index in year of publication: 2.126

Source of citations: WOS

Citations: 14

Works submitted to national or international conferences

1 **Title of the work:** Polar Phonon Modes in Ferroelastic BiVO4
Name of the conference: ISAF-PFM-ECAPD 2022
Corresponding author: No
Date of event: 27/06/2022
End date: 01/07/2022
Mael Guennou; Constance Toulouse; Robert Oliva; Marine Verseils; Jean-Blaise Brubach; Pascale Roy.

2 **Title of the work:** Vibrational and Magnetic Properties of MnxZn1-xPS3 Revealed by Low-Temperature Raman Spectroscopy
Name of the conference: ISAF-PFM-ECAPD 2022
Corresponding author: Yes
City of event: Tours, France
Date of event: 27/06/2022
End date: 01/07/2022
Robert Oliva; Faris Horani; Esther Ritov; Efrat Lifshitz; Mael Guennou.

3 **Title of the work:** Investigation of the vibrational and magnetic properties of MnxZn1-xPS3 by means of Raman spectroscopy
Name of the conference: 38th International symposium on dynamical properties of solids – dyproso –
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

4 **Title of the work:** Investigation of the vibrational and magnetic properties of MnxZn1-xPS3 by means of Raman spectroscopy
Name of the conference: Internation School of Oxide Electronics
Type of participation: Participatory - oral communication
Corresponding author: Yes
City of event: Ajaccio, France
Date of event: 24/08/2021
End date: 03/09/2021
Robert Oliva.

5 **Title of the work:** Investigation of the vibrational and magnetic properties of MnxZn1-xPS3 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
Robert Oliva; Faris Horani; Esty Ritov; Efrat Lifshitz; Mael Guennou.

6 **Title of the work:** High-pressure optical properties of the weaklybonded ReS2 and ReSe2 transition metal dichalcogenides
Name of the conference: 2018 Energy Materials and Nanotechnology Barcelona Meeting
Type of event: Conference
Type of participation: Participatory - invited/keynote talk **Reasons for participation:** Upon invitation
Corresponding author: Yes
City of event: Barcelona, Catalonia, 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 Vidal.

7 **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: University Of Warsaw **Type of entity:** University
City organizing entity: Warsaw, Poland
Robert Oliva Vidal; Szymon Zelewski; Lukasz Janicki; Katarzyna Gwozdz; Jan Serafinczuk; Mariusz Rudzinski; Ozbay; Robert Kudrawiec.

8 **Title of the work:** Photoreflectance spectroscopy of ReS2 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
R. Oliva; F. Dybala; J. Kopaczek; R. Kudrawiec.

9 **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".

10 **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
R. Oliva; J. Ibáñez; A. Segura; T. Yamaguchi; Y. Nanishi; L. Artús. "Pressure dependence of the refractive index in wurtzite and rocksalt InN".

11 **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: Wroclaw, 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: Wroclaw, 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".

12 **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, Principality of Asturias, Spain
Date of event: 20/05/2013
End date: 24/05/2013
Organising entity: MALTA **Type of entity:** State agency
City organizing entity: Madrid, Community of Madrid, Spain
R. Oliva; J. Ibáñez; L. Artús; A. Dadgar; A. Krost; C. Boney; A. Bensaoula. "Otical and vibrational high-pressure study of InGaN thin films grown on GaN and Si(111) substrates under high-pressure".

13 **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, Principality of Asturias, Spain
Date of event: 20/05/2013
End date: 24/05/2013
Organising entity: MALTA **Type of entity:** State agency
City organizing entity: Madrid, Community of Madrid, Spain
R. Oliva; J. Ibáñez; L. Artús; A. Dadgar; A. Krost; C. Boney; A. Bensaoula. "Otical and vibrational study of InGaN thin films grown on GaN and Si(111) substrates under high-pressure".

14 **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".

15 **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".

16 **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, Canary Islands, 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, Community of Madrid, 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".

17 **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".

Other dissemination activities

1 **Title of the work:** facebook page "Popular Physics" 2,706 followers, 20,000 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>.

2 **Title of the work:** Investigation of the In(Ga)N fundamental properties under high pressure
Name of the event: Seminar
Type of event: Conferences given
Corresponding author: Yes
City of event: Warsaw, Poland
Date of event: 16/08/2018
Organising entity: Insitute of High-pressure Physics – Polish Academy of Sciences
City organizing entity: Warsaw, Poland
Robert Oliva Vidal.

3 **Title of the work:** Optical and vibrational properties of InN and InGaN under high pressure
Name of the event: Seminarium Zaawansowane Metody Badania Pó?przewodników
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.

4 **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, Catalonia, Spain
Date of event: 05/02/2015
Organising entity: JIPI **Type of entity:** Associations and Groups

5 **Title of the work:** Espai Ciencia
Name of the event: Salo de l'Ensenyament
Type of event: Fairs and exhibitions
Corresponding author: Yes
City of event: Barcelona, Catalonia, Spain
Date of event: 15/03/2014
Organising entity: Institute of Earth Sciences Jaume Almera

6 **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, Catalonia, Spain
Date of event: 20/11/2013
Organising entity: University of Barcelona **Type of entity:** University

7 **Title of the work:** Que investiguem a les Ciencies 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, Catalonia, Spain
Date of event: 18/11/2013
Organising entity: Consejo Superior de Investigaciones Científicas **Type of entity:** State agency

8 **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, Catalonia, Spain
Date of event: 19/01/2012
Organising entity: University of Barcelona **Type of entity:** University
City organizing entity: Barcelona, Catalonia, Spain
Robert Oliva.

R&D management and participation in scientific committees

Organization of R&D activities

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, Catalonia, Spain
Start-End date: 12/09/2018 - 12/09/2018 **Duration:** 1 day

Evaluation and revision of R&D projects and articles

1 **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

2 **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

3 **Name of the activity:** Reviewer
Performed tasks: Review of articles in scientific or technological journals
Entity where activity was carried out: Journal: Journal of Physics: Condensed Matter **Type of entity:** Peer-reviewed Journal
City of entity: London, Inner London, United Kingdom
Start-End date: 06/07/2018 - 11/08/2018

4 **Name of the activity:** Reviewer
Performed tasks: Review of articles in scientific or technological journals
Entity where activity was carried out: Applied Surface Science **Type of entity:** peer-review journal
City of entity: Amsterdam, Noord-Holland, Holland
Start-End date: 23/06/2018 - 03/07/2018

5 **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

6 **Name of the activity:** Reviewer
Performed tasks: Review of articles in scientific or technological journals
Entity where activity was carried out: Materials Research Express **Type of entity:** peer-review journal
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:** Insitute of High-pressure Physics – UNIPRESS
Faculty, institute or centre: Polish Academy of Sciences
City of entity: Warsaw, Poland
Start-End date: 28/10/2019 - 12/11/2019 **Duration:** 10 days
Goals of the stay: Polonez3 project
Provable tasks: Talk, high-pressure measurements

2 **Entity:** Insitute of High-pressure Physics – Polish Academy of Sciences
City of entity: warsaw, Poland
Start-End date: 10/08/2018 - 25/08/2018 **Duration:** 15 days
Goals of the stay: Polonez3 project
Provable tasks: Talk, high-pressure measurements

3 **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

4 **Entity:** Universitat de València **Type of entity:** University
Faculty, institute or centre: Facultad de Física
City of entity: Burjassot, Valencian Community, 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 distinctions (professional or business career)

Description: Unique developer of a software (DataPro) for the analysis of large spectral data
Awarding entity: github.com/robertoliva/DataPro
City awarding entity: San Francisco, United States of America
Conferral date: 04/06/2021

Obtained accreditations/recognitions

1 **Description:** Machine Learning course - Stanford University
Accrediting entity: coursera
City accrediting entity: Stanford, United States of America
Date of recognition: 09/12/2019

2 **Description:** Training Programme - Management
Accrediting entity: Vitae Training Programme
City accrediting entity: Warsaw,
Date of recognition: 28/06/2019

3 **Description:** Training Programme - Personal Effectiveness
Accrediting entity: Vitae Training Programme
City accrediting entity: Warsaw,
Date of recognition: 28/06/2019

4 **Description:** Training Programme - Working with Others
Accrediting entity: Vitae Training Programme
City accrediting entity: Warsaw,
Date of recognition: 28/06/2019

5 **Description:** Workshop on Advanced Raman Spectroscopy
Accrediting entity: University of Barcelona **Type of entity:** University
City accrediting entity: Barcelona, Catalonia, Spain
Date of recognition: 08/04/2014

6 **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

7 **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

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