



## Norbert Marcel Nemes

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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.

- +Born in Budapest en 2 de octubre de 1973.
- +PhD in Physics University of Pennsylvania, 2002
- +Postdoctoral Researcher at the University of Maryland / NIST Center for Neutron Research, 2002-2004. 'Juan de la Cierva' Fellow in Instituto de Ciencia de Materiales de Madrid, CSIC, 2005-2008. 'Ramón y Cajal' Fellow in Universidad Complutense de Madrid, 2008-2013. Profesor Doctor Contratado Universidad Complutense de Madrid, 2013-2017 Profesor Titular (Assoc. Prof.) U. Complutense de Madrid
- +University teaching experience over 10 years in BSc, MSc various
- +PhD thesis director (2013), over 7 MSc theses (2009 - 2020) several undergrad projects
- +Actual research: Thermal, electronic and magnetic properties of multifunctional materials: multiferroics and thermoelectrics
- +Author of over 100 scientific papers with over 2000 cites and  $h=22$ . 4 papers with over 100 cites, 50 with over 10.
- +Most relevant publications from the past 5 years:
  - NM Nemes et al, "Signatures of a Two-Dimensional Ferromagnetic Electron Gas at the  $\text{La}_{0.7}\text{Sr}_{0.3}\text{MnO}_3/\text{SrTiO}_3$  Interface Arising from Orbital Reconstruction" *Advanced Materials*, V26, 7516 (2014)
  - A Alberca et al "Phase separation enhanced magneto-electric coupling in  $\text{La}_{0.7}\text{Ca}_{0.3}\text{MnO}_3/\text{BaTiO}_3$  ultra-thin films" *Scientific Reports*, V5, 17926 (2015)
  - F. Serrano-Sánchez, et al. "Record Seebeck coefficient and extremely low thermal conductivity in nanostructured SnSe". *Appl. Phys. Lett.* 106, 083902 (2015)
  - M. Gharsallah et al "Giant Seebeck effect in Ge-doped SnSe" *Scientific Reports*, 6, 26774 (2016)
  - F. Serrano-Sanchez, et al. "Enhanced figure of merit in nanostructured  $(\text{Bi}, \text{Sb})_2\text{Te}_3$  with optimized composition, prepared by a straightforward arc-melting procedure" *Scientific Reports*, 7, 6277 (2017)
  - F. Serrano-Sánchez, et al "Low thermal conductivity in La-filled cobalt antimonide skutterudites with an inhomogeneous filling factor prepared under high-pressure conditions" *J. Mat. Chem. A*, 6, 118 (2018)
- +Invited stays: University of Florida (2001, 2002), École Polytechnique Federale Lausanne (2005, 2006, 2013), Budapest University of Technology and Economics (2014,2018), Cambridge University (2015-2016)
- +Director of research projects:
  - "Thermal and Electronic Properties of Nanotubes (TEPON)", FP7-MC-IRG-28461, Comisión Europea;
  - "INVESTIGATION OF PRISTINE AND INTERCALATED CARBON NANOSTRUCTURES", HH2006-0028, Acciones Integradas, MEC, member of several other projects.



- +Organizing committee member: GRAPHENE meeting, financed by MICINN within framework Acción Especial de la Política Científica, "Grafeno, una acción movilizadora en un campo emergente" , Madrid, 2011. Secretary Organising Committee of II Workshop on the Physics of Complex Oxides
- +Referee of Certamen Universitario 'Arquimedes' in Physics in 2009 and in Materials in 2010.
- +Referee for various journals (over 150 refereatos): Physical Review Letters, Physical Review B (APS), Materials, Coatings (MDPI), Scientific Reports (npg), Nano Energy, Physics Letters A (Elsevier)
- +Section-Chief Editor of Physics (2020-) Editorial Board Member: The Scientific World Journal (2013-2017)
  - Editorial Board Member: Asian Journal of Materials Science (2017-)
  - Editorial Board Member: Coatings (2018-)
  - Member of Asian Council of Science Editors (2017-)
  - Guest Editor of Special Issue of Coatings: "Novel Thin Film Materials for Thermoelectric Applications" (2017-2018)
  - Over a dozen editorial decisions



## 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.

102 publications indexed by ISI, (of which 16 are conference proceedings)

2492 citations

22 h-index

4 papers with over 100 citations, a further 7 over 50, a further 40 over 10

main areas of publications: Multidisciplinary-materials science / Condensed Matter Physics / Applied Physics

over 20 papers in Phys. Rev. B.

over 20 papers in D1 first decile

most papers in Q1



## Norbert Marcel Nemes

Surname(s): **Nemes**  
Name: **Norbert Marcel**  
ORCID: **0000-0002-7856-3642**  
ResearcherID: **B-6275-2009**  
Contact aut. region/reg.: **Community of Madrid**

### Current professional situation

**Employing entity:** Universidad Complutense de Madrid  
**Department:** Departamento de Física de Materiales, Facultad de Ciencias Físicas  
**Professional category:** Profesor Titular de Universidad  
**Start date:** 13/06/2017  
**Type of contract:** Civil servant **Dedication regime:** Full time  
**Primary (UNESCO code):** 220000 - Physics  
**Identify key words:** Superconductors

### Previous positions and activities

	Employing entity	Professional category	Start date
1	Universidad Complutense de Madrid	Profesor Doctor Contratado Dep. Física Aplicada III	05/2013
2	Universidad Complutense de Madrid	Ramon y Cajal Fellow	02/2008
3	Instituto de Ciencia de Materiales de Madrid Consejo Superior de Investigaciones Científicas	Juan de la Cierva Fellow	01/2005
4	University of Maryland	Research Associate	11/2002
5	University of Pennsylvania	Research Assistant	02/1998
6	University of Pennsylvania	Teaching Assistant	09/1997
7	Technical University of Budapest	Diploma Student	05/1996

- 1** **Employing entity:** Universidad Complutense de Madrid  
**Professional category:** Profesor Doctor Contratado Dep. Física Aplicada III  
**Start-End date:** 05/2013 - 06/2017
- 2** **Employing entity:** Universidad Complutense de Madrid  
**Professional category:** Ramon y Cajal Fellow  
**Start-End date:** 02/2008 - 01/2013
- 3** **Employing entity:** Instituto de Ciencia de Materiales de Madrid Consejo Superior de Investigaciones Científicas  
**Professional category:** Juan de la Cierva Fellow  
**Start-End date:** 01/2005 - 01/2008



**4** **Employing entity:** University of Maryland  
**Professional category:** Research Associate  
**Start-End date:** 11/2002 - 07/2004

**Type of entity:** University Department

**5** **Employing entity:** University of Pennsylvania  
**Professional category:** Research Assistant  
**Start-End date:** 02/1998 - 10/2002

**6** **Employing entity:** University of Pennsylvania  
**Professional category:** Teaching Assitant  
**Start-End date:** 09/1997 - 01/1998

**7** **Employing entity:** Technical University of Budapest  
**Professional category:** Diploma Student  
**Start-End date:** 05/1996 - 08/1997



## Education

### University education

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

**1 University degree:** M.Sc.

**Name of qualification:** Master of Science (M.Sc.) in Physics

**Degree awarding entity:** Department of Physics and Astronomy, University of Pennsylvania, Philadelphia, USA

**Type of entity:** University

**Date of qualification:** 07/2001

**2 University degree:** Licenciado / Oklevel

**Name of qualification:** Oklevel in Physics

**Degree awarding entity:** Eotvos Lorand University (ELTE), Budapest, Hungary

**Type of entity:** University

**Date of qualification:** 06/1997

**3 University degree:** Oklevel kiegészito

**Name of qualification:** Technical Translation

**Degree awarding entity:** Eotvos Lorand University (ELTE), Budapest, Hungary

**Type of entity:** University

**Date of qualification:** 06/1997

#### Doctorates

**Doctorate programme:** Doctor of Philosophy (Ph.D.) in Physics

**Degree awarding entity:** Department of Physics and Astronomy, University of Pennsylvania, Philadelphia, USA

**Type of entity:** University

**Date of degree:** 20/12/2002

### Language skills

Language	Listening skills	Reading skills	Spoken interaction	Speaking skills	Writing skills
Spanish	B2	B2	B2	B2	B2
English	C2	C2	C2	C2	C2
Hungarian	C2	C2	C2	C2	C2



## Teaching experience

### General teaching experience

- 1 Name of the course:** Fundamentos de Física II  
**University degree:** Grado en Ciencias Físicas  
**Start date:** 01/10/2017 **End date:** 30/09/2018  
**Entity:** Universidad Complutense de Madrid **Type of entity:** University  
**Faculty, institute or centre:** Facultad de Ciencias Físicas
- 2 Name of the course:** Fundamentos de Física I  
**University degree:** Grado en Ciencias Físicas  
**Start date:** 01/10/2016 **End date:** 30/09/2017  
**Entity:** Universidad Complutense de Madrid **Type of entity:** University  
**Faculty, institute or centre:** Facultad de Ciencias Físicas
- 3 Name of the course:** Fundamentos de Física II  
**University degree:** Grado en Ciencias Físicas  
**Start date:** 01/10/2016 **End date:** 30/09/2017  
**Entity:** Universidad Complutense de Madrid **Type of entity:** University  
**Faculty, institute or centre:** Facultad de Ciencias Físicas
- 4 Name of the course:** Electrodinamica Clasica  
**University degree:** Grado en Ciencias Físicas  
**Start date:** 01/10/2015 **End date:** 30/09/2016  
**Entity:** Universidad Complutense de Madrid **Type of entity:** University  
**Faculty, institute or centre:** Facultad de Ciencias Físicas
- 5 Name of the course:** Fisica II  
**University degree:** Grado en Ingeniera Electronica  
**Start date:** 01/10/2015 **End date:** 30/09/2016  
**Entity:** Universidad Complutense de Madrid **Type of entity:** University  
**Faculty, institute or centre:** Facultad de Ciencias Físicas
- 6 Name of the course:** Instrumentación Electrónica  
**University degree:** Master NFyTE  
**Start date:** 01/10/2015 **End date:** 30/09/2016  
**Entity:** Universidad Complutense de Madrid **Type of entity:** University  
**Faculty, institute or centre:** Facultad de Ciencias Físicas
- 7 Name of the course:** Electrodinamica Clasica  
**University degree:** Grado en Ciencias Físicas  
**Start date:** 01/10/2014 **End date:** 30/09/2015  
**Entity:** Universidad Complutense de Madrid **Type of entity:** University  
**Faculty, institute or centre:** Facultad de Ciencias Físicas





- 8** **Name of the course:** Fisica II  
**University degree:** Grado en Ingeniera Electronica  
**Start date:** 01/10/2014 **End date:** 30/09/2015  
**Entity:** Universidad Complutense de Madrid **Type of entity:** University  
**Faculty, institute or centre:** Facultad de Ciencias Físicas
- 9** **Name of the course:** Instrumentación Electrónica  
**University degree:** Master NFyTE  
**Start date:** 01/10/2014 **End date:** 30/09/2015  
**Entity:** Universidad Complutense de Madrid **Type of entity:** University  
**Faculty, institute or centre:** Facultad de Ciencias Físicas
- 10** **Name of the course:** Electrodinamica Clasica  
**University degree:** Grado en Ciencias Físicas  
**Start date:** 01/10/2013 **End date:** 30/09/2014  
**Entity:** Universidad Complutense de Madrid **Type of entity:** University  
**Faculty, institute or centre:** Facultad de Ciencias Físicas
- 11** **Name of the course:** Fisica II  
**University degree:** Grado en Ingeniera Electronica  
**Start date:** 01/10/2013 **End date:** 30/09/2014  
**Entity:** Universidad Complutense de Madrid **Type of entity:** University  
**Faculty, institute or centre:** Facultad de Ciencias Físicas
- 12** **Name of the course:** Instrumentación Electrónica  
**University degree:** Master NFyTE  
**Start date:** 01/10/2013 **End date:** 30/09/2014  
**Entity:** Universidad Complutense de Madrid **Type of entity:** University  
**Faculty, institute or centre:** Facultad de Ciencias Físicas
- 13** **Name of the course:** Electrodinamica Clasica  
**University degree:** Licenciado en Ciencias Físicas  
**Start date:** 01/10/2011 **End date:** 30/09/2012  
**Entity:** Universidad Complutense de Madrid **Type of entity:** University  
**Faculty, institute or centre:** Facultad de Ciencias Físicas
- 14** **Name of the course:** Electrodinamica Clasica  
**University degree:** Licenciado en Ciencias Físicas  
**Start date:** 01/10/2010 **End date:** 30/09/2011  
**Entity:** Universidad Complutense de Madrid **Type of entity:** University  
**Faculty, institute or centre:** Facultad de Ciencias Físicas
- 15** **Name of the course:** Electrodinamica Clasica  
**University degree:** Licenciado en Ciencias Físicas  
**Start date:** 01/10/2009 **End date:** 30/09/2010  
**Entity:** Universidad Complutense de Madrid **Type of entity:** University  
**Faculty, institute or centre:** Facultad de Ciencias Físicas
- 16** **Name of the course:** Fundamentos Físicos de la Informática  
**University degree:** Licenciado en Ingenieria Informatica  
**Start date:** 01/10/2009 **End date:** 30/09/2010



**Entity:** Universidad Complutense de Madrid  
**Faculty, institute or centre:** Facultad de Informática

**Type of entity:** University

**17 Name of the course:** Fundamentos Físicos de la Informática

**University degree:** Licenciado en Informática

**Start date:** 01/10/2008

**End date:** 30/09/2009

**Entity:** Universidad Complutense de Madrid

**Type of entity:** University

**Faculty, institute or centre:** Facultad de Informática

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

**1 Project title:** MSc Desarrollo de nuevos materiales tipo perovskita para pilas de combustible de óxido sólido (SOFC)

**Entity:** Universidad Complutense de Madrid

**Type of entity:** University

**Student:** Sabina Sydyknazar

**Date of reading:** 2018

**2 Project title:** MSc Caracterización del efecto Seebeck de materiales termoeléctricos

**Entity:** Universidad Complutense de Madrid

**Type of entity:** University

**Student:** Javier Gainza Martin

**Date of reading:** 2017

**3 Project title:** MSc Caracterización de materiales termoeléctricos con el método 3-?

**Entity:** Universidad Complutense de Madrid

**Type of entity:** University

**Student:** Felix Carrasco Plana

**Date of reading:** 2016

**4 Project title:** MSc Caracterización de materiales termoeléctricos en alta temperatura

**Entity:** Universidad Complutense de Madrid

**Type of entity:** University

**Student:** Carlos de la Calle Gallardo

**Date of reading:** 2016

**5 Project title:** PhD tesis: Óxidos en la nanoescala, estudios de los interfaces

**Entity:** Universidad Complutense de Madrid

**Type of entity:** University

**Student:** Aurora Alberca Carretero

**Date of reading:** 2013

**6 Project title:** MSc Ferromagnet/superconductor heterostructures

**Entity:** Universitat de l'Aquila

**Type of entity:** University

**Student:** Mirko Rocci

**Date of reading:** 2009



## Educational or pedagogical publications, books, articles, etc.

- 1** Norbert Marcel Nemes. SmartFIS: utilizando los teléfonos móviles en el aprendizaje de la Física,  
**Name of the materials:** Report  
**Date of drafting:** 30/03/2020  
**Corresponding author:** Yes
- 2** Francisco Lopez Santos; Norbert Nemes. Innovación en educación y producción de cultura científica,  
**Name of the materials:** ISBN 9788417270254  
**Date of drafting:** 31/12/2017  
**Format:** Book

## Participation in innovative teaching projects

- 1** **Project title:** SmartFIS: utilizando los teléfonos móviles en el aprendizaje de la Física  
**Type of participation:** Principal investigator  
**Time of working relationship:** For an undetermined time  
**Funding entity:** Universidad Complutense de Madrid      **Type of entity:** University  
**Start-End date:** 01/04/2018 - 30/03/2020      **Duration:** 2 years
- 2** **Project title:** Adaptacion del Laboratorio de Electrodnámica Clásica al Espacio Europeo del Educacion Superior  
**Type of participation:** Team member  
**Time of working relationship:** For an undetermined time  
**Funding entity:** Universidad Complutense de Madrid      **Type of entity:** University  
**Start-End date:** 01/10/2009 - 30/09/2010

## Participation in conferences with talks focused on teacher training

**Name of the event:** I Congreso Internacional de Innovación y Tendencias Educativas  
**Type of event:** Conference  
**City of event:** Sevilla, Andalusia, Spain  
**Date of presentation:** 06/07/2017  
**Organising entity:** Universidad de Sevilla      **Type of entity:** University  
Innovación en educación y producción de cultura científica.



## Scientific and technological experience

### Research and development groups/teams

**Name of the group:** Grupo de Física de Materiales Complejos

**Aims of the group:** publications on the study of complex condensed matter

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

**Affiliation entity:** Universidad Complutense de Madrid **Type of entity:** University

**Start date:** 01/05/2008

### Scientific or technological activities

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

- 1 Name of the project:** OPTIMIZACION DE PROPIEDADES ELECTRONICAS DE DISPOSITIVOS DE INTERFASE: SPIN-ORBITRONICA Y SPINMEMRISTORES MAT2014-52405-C2-2-R

**Entity where project took place:** Instituto de Ciencia **Type of entity:** State agency de Materiales de Madrid

**City of entity:** Madrid, Community of Madrid, Spain

**Name principal investigator (PI, Co-PI...):** Federico Mompean Garcia; Maria del Mar Garcia Hernandez

**Nº of researchers:** 4

**Funding entity or bodies:** MINISTERIO DE EDUCACION Y CIENCIA

**City funding entity:** Spain

**Start-End date:** 01/01/2014 - 31/12/2017

**Total amount:** 210.000 €
- 2 Name of the project:** Imagine: Material Science down to the subAngstrom scale MINECO CSD2009-00013. Consolider-Ingenio

**Nº of researchers:** 50

**Start-End date:** 01/01/2009 - 31/12/2016

**Total amount:** 3.600.000 €
- 3 Name of the project:** Complex Oxide Interfaces: Understanding, Tailoring and Applying MAT2011-27470-C02-02

**Entity where project took place:** Instituto de Ciencia **Type of entity:** State agency de Materiales de Madrid

**Name principal investigator (PI, Co-PI...):** Maria del Mar Garcia Hernandez

**Nº of researchers:** 3

**Start-End date:** 01/01/2012 - 30/06/2016

**Total amount:** 254.100 €
- 4 Name of the project:** MATERIALES PARA CONVERSION DE ENERGIA: OXIDOS, CALCOGENUROS, PNICTUROS Y HALUROS MAT2017-84496-R

**Entity where project took place:** Instituto de Ciencia **Type of entity:** State agency de Materiales de Madrid



**Name principal investigator (PI, Co-PI...):** Jose Luis Martinez Pena; Jose Antonio Alonso Alonso  
**Nº of researchers:** 3  
**Start date:** 01/01/2018  
**Total amount:** 198.000 €

## Scientific and technological activities

### Scientific production

**H index:** 22  
**Date of application:** 01/05/2019

### Works submitted to national or international conferences

- 1 Title of the work:** Conduction electron spin resonance in the superconducting state of K3C60  
**Name of the conference:** 13th International Winterschool on Electronic Properties of Novel Materials  
**City of event:** KIRCHBERG,  
**Organising entity:** Aventi Res & Technologies; AVL LIST GmbH; Bruker Analyt Messtech GmbH; Creditanstalt Bankverein; Novocontrol GmbH; Omikron Vacuum Physik GmbH; Pirelli Cavi Sistemi SpA; Vakuum & Syst Teck GmbH  
**Type of contribution:** Scientific paper  
Nemes, NM; Fischer, JE; Baumgartner, G; Forro, L; Janossy, A. "ELECTRONIC PROPERTIES OF NOVEL MATERIALS - SCIENCE AND TECHNOLOGY OF MOLECULAR NANOSTRUCTURES". En: AIP CONFERENCE PROCEEDINGS. 486, pp. 56 - 59. 01/01/1999. ISSN 0094-243X, ISBN 1-56396-900-9
- 2 Title of the work:** Distortion and orientation of fulleride-ions in A(4)C(60)  
**Name of the conference:** 18th International Winterschool/Euroconference on Electronic Properties of Novel Materials  
**City of event:** Kirchberg,  
**Organising entity:** Bundesminist Bild, Wissensch & Kultur; Phantoms; Verein Forder Int Winterschulen; Bruker Opt GmbH; Electro V AC GmbH; Jobin Yvon GmbH; Nanocarlab; Nanocyl SA; Omicron Nano Technol GmbH; Phys Status S  
**Type of contribution:** Scientific paper  
Klupp, G; Kamaras, K; Nemes, NM; Brown, CM; Leao, J. "ELECTRONIC PROPERTIES OF SYNTHETIC NANOSTRUCTURES". En: AIP CONFERENCE PROCEEDINGS. 723, pp. 8 - 11. 01/01/2004. ISSN 0094-243X, ISBN 0-7354-0204-3
- 3 Title of the work:** Effect of ionic and covalent functionalization on optical spectra of SWNT'S.  
**Name of the conference:** 227th National Meeting of the American-Chemical Society  
**City of event:** Anaheim,  
**Organising entity:** Amer Chem Soc  
**Type of contribution:** Scientific paper  
Kamaras, K; Borondics, F; Hu, H; Itkis, ME; Zhao, B; Haddon, RC; Nemes, NM; Fischer, JE; Chen, ZH; Nikolou, M; Rinzler, AG; Tanner, DB. "ABSTRACTS OF PAPERS OF THE AMERICAN CHEMICAL SOCIETY". 227, pp. U1264 - U1265. 28/03/2004. ISSN 0065-7727
- 4 Title of the work:** Electron spin resonance of single-walled carbon nanotubes and related structures  
**Name of the conference:** 20th International Winterschool/Euroconference on Electronic Properties of Novel Materials



**City of event:** Kirchberg,

**Type of contribution:** Scientific paper

Nafradi, B.; Nemes, N. M.; Feher, T.; Forro, L.; Kim, Y.; Fischer, J. E.; Luzzi, D. E.; Simon, F.; Kuzmany, H. "PHYSICA STATUS SOLIDI B-BASIC SOLID STATE PHYSICS". 243 - 13, pp. 3106 - 3110. 01/11/2006. ISSN 0370-1972, ISSN 1521-3951

- 5** **Title of the work:** Electron spin resonance of single-walled carbon nanotubes and related structures  
**Name of the conference:** 20th International Winterschool/Euroconference on Electronic Properties of Novel Materials  
**City of event:** Kirchberg,  
**Type of contribution:** Scientific paper  
Nafradi, B.; Nemes, N. M.; Feher, T.; Forro, L.; Kim, Y.; Fischer, J. E.; Luzzi, D. E.; Simon, F.; Kuzmany, H. "PHYSICA STATUS SOLIDI B-BASIC SOLID STATE PHYSICS". 243 - 13, pp. 3106 - 3110. 01/11/2006. ISSN 0370-1972
- 6** **Title of the work:** Electronic and structural properties of alkali doped SWNT  
**Name of the conference:** 16th International Winterschool on Electronic Properties of Novel Materials  
**City of event:** KIRCHBERG,  
**Organising entity:** AVL LIST GmbH; Bruker Optik GmbH; Creditanstalt Bankverein; Jobin Yvon GmbH; Omicron Nanotechnol GmbH; Rosseter Holdings Ltd; Toyota Motor Co Europe; Xzillion GmbH; Bundesminist Wissensch & Forsch AT;  
**Type of contribution:** Scientific paper  
Nemes, NM; Fischer, JE; Kamaras, K; Tanner, DB; Rinzler, AG. "STRUCTURAL AND ELECTRONIC PROPERTIES OF MOLECULAR NANOSTRUCTURES". En: AIP CONFERENCE PROCEEDINGS. 633, pp. 259 - 262. 01/01/2002. ISSN 0094-243X, ISBN 0-7354-0088-1
- 7** **Title of the work:** Facile preparation of SnSe derivatives in nanostructured polycrystalline form by arc-melting synthesis  
**Name of the conference:** 14th European Conference on Thermoelectrics (ECT)  
**City of event:** Lisbon,  
**Type of contribution:** Scientific paper  
Serrano-Sanchez, F.; Gharsallah, M.; Nemes, N. M.; Mompean, F. J.; Martinez, J. L.; Alonso, J. A. "MATERIALS TODAY-PROCEEDINGS". 5 - 4, pp. 10218 - 10226. 01/01/2018. ISSN 2214-7853
- 8** **Title of the work:** Identifying the electron spin resonance of conduction electrons in alkali doped SWCNTs  
**Name of the conference:** 23rd Winterschool on Electronic Properties of Novel Materials  
**City of event:** Kirchberg,  
**Organising entity:** Verein Forder Winterschulen; Verein Durchfuhr Int Wintersch Elect Properties Novel Mat  
**Type of contribution:** Scientific paper  
Galambos, M.; Fabian, G.; Simon, F.; Ciric, L.; Forro, L.; Korecz, L.; Rockenbauer, A.; Koltai, J.; Zolyomi, V.; Ruzsnyak, A.; Kuerti, J.; Nemes, N. M.; Dora, B.; Peterlik, H.; Pfeiffer, R.; Kuzmany, H.; Pichler, T. "PHYSICA STATUS SOLIDI B-BASIC SOLID STATE PHYSICS". 246 - 11-12, pp. 2760 - 2763. 01/12/2009. ISSN 0370-1972, ISSN 1521-3951
- 9** **Title of the work:** Identifying the electron spin resonance of conduction electrons in alkali doped SWCNTs  
**Name of the conference:** 23rd Winterschool on Electronic Properties of Novel Materials  
**City of event:** Kirchberg,  
**Organising entity:** Verein Forder Winterschulen; Verein Durchfuhr Int Wintersch Elect Properties Novel Mat  
**Type of contribution:** Scientific paper  
Galambos, M.; Fabian, G.; Simon, F.; Ciric, L.; Forro, L.; Korecz, L.; Rockenbauer, A.; Koltai, J.; Zolyomi, V.; Ruzsnyak, A.; Kuerti, J.; Nemes, N. M.; Dora, B.; Peterlik, H.; Pfeiffer, R.; Kuzmany, H.; Pichler, T. "PHYSICA STATUS SOLIDI B-BASIC SOLID STATE PHYSICS". 246 - 11-12, pp. 2760 - 2763. 01/12/2009. ISSN 0370-1972



- 10 Title of the work:** Investigation of hydrogenated HiPCo nanotubes by infrared spectroscopy  
**Name of the conference:** 24th International WinterSchool on Electronic Properties of Novel Materials - Molecular Nanostructures (IWEPNM 2010)  
**City of event:** Kirchberg/Tirol,  
**Organising entity:** Appl Nanofluorescence; Bruker Opt; Graphene Ind Ltd; HORIBA Jobin Yvon GmbH; NACALAI TESQUE, INC; SINEUROP Nanotech GmbH; Wiley-VCH Verlag GmbH & Co.  
**Type of contribution:** Scientific paper  
Nemeth, Katalin; Pekker, Aron; Borondics, Ferenc; Jakab, Emma; Nemes, Norbert M.; Kamaras, Katalin; Pekker, Sandor. "PHYSICA STATUS SOLIDI B-BASIC SOLID STATE PHYSICS". 247 - 11-12, pp. 2855 - 2858. 01/12/2010. ISSN 0370-1972
- 11 Title of the work:** Investigation of hydrogenated HiPCo nanotubes by infrared spectroscopy  
**Name of the conference:** 24th International Winterschool on Electronic Properties of Novel Materials - Molecular Nanostructures (IWEPNM 2010)  
**City of event:** Kirchberg/Tirol,  
**Organising entity:** Appl Nanofluorescence; Bruker Opt; Graphene Ind Ltd; HORIBA Jobin Yvon GmbH; NACALAI TESQUE, INC; SINEUROP Nanotech GmbH; Wiley-VCH Verlag GmbH & Co.  
**Type of contribution:** Scientific paper  
Nemeth, Katalin; Pekker, Aron; Borondics, Ferenc; Jakab, Emma; Nemes, Norbert M.; Kamaras, Katalin; Pekker, Sandor. "PHYSICA STATUS SOLIDI B-BASIC SOLID STATE PHYSICS". 247 - 11-12, pp. 2855 - 2858. 01/12/2010. ISSN 0370-1972, ISSN 1521-3951
- 12 Title of the work:** Large Seebeck coefficients in  $\text{La}_2\text{NiO}_4+\delta$  with tuned  $\delta$  values  
**Name of the conference:** 14th European Conference on Thermoelectrics (ECT)  
**City of event:** Lisbon,  
**Type of contribution:** Scientific paper  
Serrano-Sanchez, F.; Pinacca, R.; Troncoso, L.; Nemes, N. M.; Martinez, J. L.; Alonso, J. A. "MATERIALS TODAY-PROCEEDINGS". 5 - 4, pp. 10203 - 10210. 01/01/2018. ISSN 2214-7853
- 13 Title of the work:** Large magnetoresistance in oxide based ferromagnet/superconductor spin switches  
**Name of the conference:** Symposium on Degradation Processes in Nanostructured Materials held at the 2005 MRS Fall Meeting  
**City of event:** Boston,  
**Type of contribution:** Scientific paper  
Pena, V.; Nemes, N.; Visani, C.; Garcia-Barriocanal, J.; Bruno, F.; Arias, D.; Sefrioui, Z.; Leon, C.; Velthuis, S. G. E. Te; Hoffmann, A.; Garcia-Hernandez, M.; Santamaria, J. "DEGRADATION PROCESSES IN NANOSTRUCTURED MATERIALS". En: Materials Research Society Symposium Proceedings. 887, pp. 95 - +. 01/01/2006. ISSN 0272-9172, ISBN 1-55899-841-1
- 14 Title of the work:** Magnetic coupling in  $\text{La}_{0.7}\text{Ca}_{0.3}\text{MnO}_3/\text{YBa}_2\text{Cu}_3\text{O}_7/\text{La}_{0.7}\text{Ca}_{0.3}\text{MnO}_3$  trilayers  
**Name of the conference:** 7th International Conference on Diffusion in Materials  
**City of event:** Lanzarote,  
**Type of contribution:** Scientific paper  
Nemes, N. M.; Visani, C.; Garcia-Barriocanal, J.; Bruno, F. Y.; Sefrioui, Z.; Arias, D.; Leon, C.; Garcia Hernandez, M.; te Velthuis, S. G. E.; Hoffmann, A.; Santamaria, J. "DIFFUSION IN MATERIALS - DIMAT2008". En: Defect and Diffusion Forum. 289-292, pp. 303 - +. 01/01/2009. ISSN 1012-0386, ISBN \*\*\*\*\*
- 15 Title of the work:** Magnetoresistance in  $\text{La}_{0.7}\text{Ca}_{0.3}\text{MnO}_3\text{-YBa}_2\text{Cu}_3\text{O}_7\text{F/S/F}$  trilayers  
**Name of the conference:** 3rd Joint European Magnetic Symposia (JEMS 06)  
**City of event:** San Sebastian,  
**Organising entity:** Natl Advisory Comm



**Type of contribution:** Scientific paper

Pena, V.; Visani, C.; Bruno, F.; Garcia-Barriocanal, J.; Arias, D.; Rivera, A.; Sefrioui, Z.; Leon, C.; Velthuis, S. G. E. Te; Hoffmann, A.; Nemes, N.; Garcia-Hernandez, M.; Martinez, J. L.; Santamaria, J."JOURNAL OF MAGNETISM AND MAGNETIC MATERIALS". 316 - 2, pp. E745 - E748. 01/09/2007. ISSN 0304-8853, ISSN 1873-4766

**16 Title of the work:** Magnetoresistance in La<sub>0.7</sub>Ca<sub>0.3</sub>MnO<sub>3</sub>-YBa<sub>2</sub>Cu<sub>3</sub>O<sub>7</sub>F/S/F trilayers

**Name of the conference:** 3rd Joint European Magnetic Symposia (JEMS 06)

**City of event:** San Sebastian,

**Organising entity:** Natl Advisory Comm

**Type of contribution:** Scientific paper

Pena, V.; Visani, C.; Bruno, F.; Garcia-Barriocanal, J.; Arias, D.; Rivera, A.; Sefrioui, Z.; Leon, C.; Velthuis, S. G. E. Te; Hoffmann, A.; Nemes, N.; Garcia-Hernandez, M.; Martinez, J. L.; Santamaria, J."JOURNAL OF MAGNETISM AND MAGNETIC MATERIALS". 316 - 2, pp. E745 - E748. 01/09/2007. ISSN 0304-8853

**17 Title of the work:** Nanosegregation in Na<sub>2</sub>C<sub>6</sub>O

**Name of the conference:** 19th International Winterschool and Euroconference on Electronic Properties of Novel Materials

**City of event:** Kirchberg,

**Organising entity:** Bundeminterium Bild, Wissensch Kultur; Austrian Nano Initiat, Forsch Forder Gesell GmbH; Verein Forder Int Winterschulen Kirchberg

**Type of contribution:** Scientific paper

Klupp, G; Kamaras, K; Nemes, NM; Matus, P; Quintavalle, D; Kiss, LF; Kovats, E; Pekker, S; Janossy, A. "Electronic Properties of Novel Nanostructures". En: AIP CONFERENCE PROCEEDINGS. 786, pp. 17 - 20. 01/01/2005. ISSN 0094-243X, ISBN 0-7354-0275-2

**18 Title of the work:** Single wall carbon nanotubes filled with metallocenes: a first example of non-fullerene peapods

**Name of the conference:** Symposium on Making Functional Materials with Nanotubes held at the 2001 MRS Fall Meeting

**City of event:** BOSTON,

**Organising entity:** Mat Res Soc

**Type of contribution:** Scientific paper

Stercel, F; Nemes, NM; Fischer, JE; Luzzi, DE. "MAKING FUNCTIONAL MATERIALS WITH NANOTUBES". En: MATERIALS RESEARCH SOCIETY SYMPOSIUM PROCEEDINGS. 706, pp. 245 - 250. 01/01/2002. ISSN 0272-9172, ISBN 1-55899-642-7

**19 Title of the work:** Spin dependent transport at oxide La<sub>0.7</sub>Ca<sub>0.3</sub>MnO<sub>3</sub>/YBa<sub>2</sub>CU<sub>3</sub>O<sub>7</sub> ferromagnet/superconductor interfaces

**Name of the conference:** International Conference on Electroceramics

**City of event:** Toledo,

**Organising entity:** Minist Ciencia Tecnol; Consejo Super Investigac Cientif; Junta Comuni Castilla Mancha; Univ Castilla Mancha; Camara Comerc Toledo; Ayuntamiento Toledo; INASMET-Tecnal; COST; ELENA; Elsevier; Mat Mates

**Type of contribution:** Scientific paper

Penna, V.; Nemes, N.; Visani, C.; Bruno, Ey; Arias, D.; Sefrioui, Z.; Leon, C.; Velthuis, S. G. E. Te; Hoffmann, A.; Garcia-Hernandez, M.; Martine, J. L.; Santamaria, J."JOURNAL OF THE EUROPEAN CERAMIC SOCIETY". 27 - 13-15, pp. 3967 - 3970. 01/01/2007. ISSN 0955-2219, ISSN 1873-619X

**20 Title of the work:** Thickness Dependent Magnetic Anisotropy of Ultrathin LCMO Epitaxial Thin Films

**Name of the conference:** International Magnetics Conference (Intermag)

**City of event:** Madrid,

**Type of contribution:** Scientific paper





Nemes, Norbert Marcel; Garcia-Hernandez, Mar; Szatmari, Zsolt; Feher, Titusz; Simon, Ferenc; Visani, Cristina; Pena, Vanessa; Miller, Christian; Garcia-Barriocanal, Javier; Bruno, Flavio; Sefrioui, Zouhair; Leon, Carlos; Santamaria, Jacobo. "IEEE TRANSACTIONS ON MAGNETICS". 44 - 11, pp. 2926 - 2929. 01/11/2008. ISSN 0018-9464

## R&D management and participation in scientific committees

### R&D management

**Name of the activity:** Unidad de Magnetometría y Criogenia

**Type of management:** Management of body

**Performed tasks:** Director

**Entity:** CAI Tecnicas Fisicas de Universidad Complutense de Madrid

**Start date:** 10/01/2022

**Duration:** 4 years

## Other achievements

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

- 1** **Entity:** Technical University of Budapest **Type of entity:** University  
**Faculty, institute or centre:** Department of Physics  
**City of entity:** Budapest, Extra-Regio, Hungary  
**Start-End date:** 02/07/2018 - 24/07/2018  
**Goals of the stay:** Guest  
**Provable tasks:** Microwave techniques for spintronics
- 2** **Entity:** Technical University of Budapest **Type of entity:** University  
**Faculty, institute or centre:** Department of Physics  
**City of entity:** Budapest, Extra-Regio, Hungary  
**Start-End date:** 02/07/2018 - 24/07/2018  
**Goals of the stay:** mobility  
**Provable tasks:** magnetic resonance and microwave techniques for complex oxides and thermoelectrics
- 3** **Entity:** Cambridge University **Type of entity:** University  
**Faculty, institute or centre:** Department of Engineering  
**City of entity:** Cambridge, Bedfordshire and Hertfordshire, United Kingdom  
**Start-End date:** 01/10/2015 - 01/12/2015  
**Goals of the stay:** Guest  
**Provable tasks:** ab initio calculations of thermoelectric materials
- 4** **Entity:** EPFL **Type of entity:** University  
**Faculty, institute or centre:** Department of Physics  
**City of entity:** Lausanne, Switzerland  
**Start-End date:** 05/02/2013 - 05/05/2013  
**Goals of the stay:** Guest  
**Provable tasks:** Electron Spin Resonance of complex oxides



## Obtained grants and scholarships

- 1 Name of the grant:** Ramon y Cajal fellowship  
**Aims:** Post-doctoral  
**Awarding entity:** MINECO **Type of entity:** State agency  
**Conferral date:** 01/02/2008  
**End date:** 31/01/2013  
**Entity where activity was carried out:** Universidad Complutense de Madrid  
**Faculty, institute or centre:** Departamento de Física Aplicada III (UCM)
- 2 Name of the grant:** Juan de la Cierva fellowship  
**Aims:** Post-doctoral  
**Awarding entity:** MCYT **Type of entity:** State agency  
**Conferral date:** 16/01/2005  
**End date:** 15/01/2008  
**Entity where activity was carried out:** Instituto de Ciencia de Materiales de Madrid
- 3 Name of the grant:** Marie-Curie IRG  
**Aims:** FP6-2004-Mobility-12 PHY  
**Awarding entity:** European Commission **Type of entity:** Public Research Body  
**Conferral date:** 03/09/2005  
**End date:** 31/12/2007  
**Entity where activity was carried out:** Instituto de Ciencia de Materiales de Madrid

## Editorial councils

- 1 Name of the editorial council:** Asian Council of Science Editors  
**Affiliation entity:** Asian Council of Science Editors  
**Start date:** 01/02/2017
- 2 Name of the editorial council:** Coatings  
**Affiliation entity:** mdpi **Type of entity:** Business  
**Start date:** 01/01/2017
- 3 Name of the editorial council:** The Scientific World Journal  
**Affiliation entity:** Hindawi  
**Start date:** 01/01/2013 **Duration:** 4 years

## Periods of research activity

- 1 Nº of recognized periods:** 1  
**Certifying entity:** Universidad Complutense de Madrid **Type of entity:** University  
**Date of recognition:** 06/07/2017



**2** Nº of recognized periods: 2

**Certifying entity:** Universidad Complutense de Madrid

**Type of entity:** University

**Date of recognition:** 16/06/2014

### Obtained accreditations/recognitions

**1** **Description:** Catedrático de Universidad

**Accrediting entity:** Agencia Nacional de Evaluación de la Calidad y Acreditación **Type of entity:** .

**City accrediting entity:** Madrid, Community of Madrid, Spain

**Date of recognition:** 01/07/2020

**2** **Description:** I3

**Accrediting entity:** Agencia Nacional de Evaluación y Prospectiva **Type of entity:** anep

**Date of recognition:** 18/06/2012

**3** **Description:** Profesor Titular

**Accrediting entity:** Agencia Nacional de Evaluación de la Calidad y Acreditación **Type of entity:** aneca

**Date of recognition:** 21/11/2011