

Curriculum Vitae

Leonard Deepak Francis

Research Group Leader – Nanostructured Materials

<http://inl.int/advanced-electron-microscopy/nanostructured-materials/>

Department of Advanced Electron Microscopy, Imaging and Spectroscopy (AEMIS)

International Iberian Nanotechnology Laboratory

Av. Mestre José Veiga s/n

4715-330 Braga - Portugal

Ph: 351 253 140 112 – (2160)

Email: leonard.francis@inl.int

<http://orcid.org/0000-0002-3833-1775>

Nationality: Indian

Language proficiency:

English (proficient), German (proficient), Hebrew (basic), Portuguese (intermediate), French (basic), Tamil (mother tongue)

Professional and Academic Background

1995-1998	B. Sc. (Chemistry) Loyola College, Chennai, India.
1998-2000	M. Sc. (Chemistry) Loyola College, Chennai, India.
2000-2005	PhD (Prof. C. N. R. Rao, F.R.S., Jawaharlal Nehru Centre for Advanced Scientific Research, Bangalore, India)
Aug 2005- Dec 2005	Research Fellow (Prof. C. N. R. Rao, F.R.S., Jawaharlal Nehru Centre for Advanced Scientific Research, Bangalore, India)

2006-2008	Postdoctoral Fellow (Prof. Reshef Tenne, Weizmann Institute of Science, Fellowship from Feinberg Graduate School and Prof. Reshef Tenne)
2009-2011	Postdoctoral Fellow (International Iberian Nanotechnology Laboratory (INL), Braga, Portugal working with Prof. Miguel Jose Yacamán, University of Texas at San Antonio, U.S.A)
2011-2013	Fellow , International Iberian Nanotechnology Laboratory (INL)
2013-2016	Staff Researcher , International Iberian Nanotechnology Laboratory (INL)
2016-present	Research Group Leader – Nanostructured Materials , International Iberian Nanotechnology Laboratory (INL)

RESEARCH HIGHLIGHTS

- >100 publications
- 8 reviews in major international journals.
- 5 Conference Proceedings
- 1 Editorial
- 3 Book Chapters.
- 2 Books (Edited Work).
- 1 Journal Special Issue (Edited Work)
- 3 Patents
- h-index – 28.
- Supervision: 6 Postdoctoral Research Fellows, 2 Master's Thesis, 2 PhD Thesis.
- **Reviewer** for various Nature, ACS, RSC, Wiley, Springer and Elsevier journals including Nat Comm, Small, ACS Appl. Nanomaterials, ACS Omega, J. Phys Chem Lett., J. Phys. Chem C, Chem. Mater, J. Mater. Chem., Chem. Comm., PCCP, Crystal Growth and Design, CrystEngComm, J Colloid and Interface Science, Nanoscale Research Letters, J. Mat. Sci., International Journal of Hydrogen Energy, Physica Status Solidi B: Basic Solid State Physics, Ceramics International, Colloids and Surfaces B: Biointerfaces, Mat. Res. Lett., ACS Sustainable Chemistry and Engineering among others.
- **Guest editor** for a special issue of the Journal of Nano Materials (Hindawi Publishing Corporation), issue entitled, Nanomaterial Properties: Size and Shape Dependencies (2012). (Nanomaterial Properties: Size and Shape Dependencies, Grégory Guisbiers, Sergio Mejía-Rosales, and Francis Leonard Deepak, J. Nanomaterials, Volume 2012 (2012), Article ID 180976, 2 pages).
- **Editorial Board and Reviewer Board:** International Journal of Nanomaterials, Nanotechnology and Nanomedicine (<https://www.peertechz.com/journals/international-journal-of-nanomaterials-nanotechnology-and-nanomedicine/editorial-board>)
- **Editorial Board:** Nanoparticle Journal (<https://www.jnanoparticle.com/editorial-board>)

- **Editorial Board Member:** Journal of Nanoscience and Nanomedicine (<https://www.pulsus.com/journal-nanoscience-nanomedicine/editorial-board.html>)
- **Editorial Board Member:** Nanoscience and Nanometrology (<http://www.sciencepublishinggroup.com/journal/editorialboard?journalid=356>)
- **Editorial Board Member:** Madridge Journal of Nanotechnology & Nanoscience (MJNN) (<https://madridge.org/journal-of-nanotechnology-and-nanoscience/editors>)
- **Editorial Board Member:** American Research Journal of Nanotechnology (ARJNT) (<https://www.arjonline.org/american-research-journal-of-nanotechnology/editorial-board>)
- **Editorial Board Member:** International Journal of Materials Science (http://helicsgroup.net/journal/journal_info/MaterialsScientificNetworks/23)
- **Symposium Co-Organizer:** Symposium 5, Electron Microscopy of Materials, XXII International Materials Research Congress, Cancun, Mexico, Aug 11 - 15, 2013.
- **Electron Microscopy School Co-Organizer:** Transmission and Scanning Electron Microscopy Course, Mar 20-24, 2017, International Iberian Nanotechnology Laboratory, Braga, Portugal (<https://www.electronmicroscopycourse.com/>)
- **Organizer: School in Advanced Electron Microscopy** Satellite Event of Materials 2017, Apr 09, 2017, University of Aveiro (<http://materiais2017.web.ua.pt/index.htm>)
- **Co-Organizer:** “Latest advances in electron microscopy instrumentation in life sciences and materials science” - INL-Thermo Fischer, June 13, 2017, International Iberian Nanotechnology Laboratory.
- **Co-Organizer:** Workshop on Latest Advances in Cryo-Electron Microscopy Instrumentation for Life Sciences, INL-JEOL Europe-Gatan, July 17, 2017, International Iberian Nanotechnology Laboratory.
- **Co-Organizer:** International Workshop on Electron Microscopy - May 4th, 2018 (<http://electron-microscopy.inl.int/workshop-electron-microscopy-2018/>), International Iberian Nanotechnology Laboratory.
- **Co-Organizer:** INL-JNCASR Workshop on Nanotechnology, Oct 17, 2018.
- **Session Chair:** 3rd World Congress on Materials Science and Engineering, Barcelona, Aug 24-26, 2017.
- **Session Co-Chair:** Materials Science Session, Microscopy at the Frontiers of Science, Zaragoza, Sep 5-8, 2017.
- **Scientific Committee:** Advanced Nanomaterials Conference (ANM-2017 and ANM – 2018) <http://www.advanced-nanomaterials-conference.com/committees/>
- **Scientific Committee and International Advisory Board:** International Conference on Advanced Materials (ICAM 2019) <https://ngcphysics.org.in/icam2019/>
- **National Committee Member:** Materials Science & Nanotechnology Conference (Future Materials), February 24-26, 2019 Lisbon, Portugal; 24-26, 2020, Lisbon, Portugal; <http://materialsconference.yuktan.com/>
- **Proposals Reviewer:** US Department of Energy, Office of Basic Energy Sciences (USA) - Proposal reviewer across several areas within the office of basic energy sciences, (2018-present).

- **Invited Talks** -13, **Guest Lecture** – 2, **Tutorial Lectures** – 3, **Invited Departmental Seminars** – 2, **Oral Contributions** – 24, **Poster Presentations** – 20.

Memberships of International Societies

- (i) ICMAT and ICAM: 2005-2006
- (ii) Israel Chemical Society: 2006-2008
- (iii) Israel Microscopy Society: 2006-2008
- (iv) Israel Vacuum Society: 2006-2008
- (v) MRS (IMRC): 2011-2012, 2013-2014, 2018-2019
- (vi) E-MRS: 2007-2008, 2018-2019, 2019-2020
- (vii) MRS: 2019-2020

Awards and Fellowships

- 1999-2000 Summer Research Fellow in JNCASR
- 2000 Summer research Fellow award.

Fellowship from Feinberg Graduate School, Weizmann Institute of Science 2006-2008.

Selected as **Outstanding Scientist Worldwide for 2007** from the **International Biographical Centre of Cambridge, England.**

Selected as **Marquis Who's Who of Emerging Leaders, 2007 Edition** and **Marquis Who's Who in Asia, 2007 Edition.**

Selected as **Marquis Who's Who in Science and Engineering, 2007 Edition.**

IEEE Prize from Israel Vacuum Society conference

(Poster - Fullerene-Like (IF) $\text{Nb}_x\text{Mo}_{1-x}\text{S}_2$ Nanoparticles)

26th Annual Israel Vacuum Society meeting, Israel Air Force House, Herzliya

European Projects

- NANOHVAC (Novel Nano-enabled Energy Efficient and Safe HVAC ducts and systems contributing to a healthier indoor environment)
- NANoReg (A common European approach to the regulatory testing of nanomaterials)

Regional Projects

- Self-assembled functionalized nanomaterials for biomolecular recognition (BSELF) Call: SAESCTN-PIIC&DT/1/2011.
- Fate and Effect of Engineered Nanoparticles in Wastewater Treatment Plants (WATERNANOENV), Axencia Galega de Innovación (GAIN)-ERDF
- N2020. Nanotechnology based functional solutions (NORTE-45-2015-02). Duration: 2016-2020

National Projects

- Correlated Analysis of Inorganic Solar Cells in and outside an Electron Microscope (CASOLEM – 028917), Funding Program: FCT and the ERDF through COMPETE2020
- FLASH sintering of lead free functional oxides towards sustainable processing of materials for energy and related applications (FLASH), Funding Program: FCT and the ERDF through COMPETE2020
- Two dimensional magnetic semiconductors (2DMS), Funding Program: FCT-UT Austin
- REEs-free high-performance permanent magnets based on exchange-spring and high anisotropy phases (CritMag), Funding Program: FCT and the ERDF through COMPETE2020