

Professor Punniamoorthy Ravirajan

Dean/Faculty of Science and Senior Professor in Physics, University of Jaffna
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<http://project.jfn.ac.lk/hrncet/>, <http://www.sci.jfn.ac.lk/>, <http://scholar.google.com/citations?hl=en&user=l1wPmm8AAAAJ>

Educational Qualifications

- **BSc (Hons)** in Physics
1991-1995, Special Degree in Physics, University Jaffna, Sri Lanka.
- **MSc** in Material Physics
1997-1999, MSc course in Physics of Materials, University of Peradeniya, Sri Lanka.
- **DIC, PhD** in Material Physics
2001-2004, Imperial College London, University of London, UK.
Title of the thesis: Fabrication and Characterisation of **Hybrid Metal oxide / Polymer Photovoltaic devices** (Solar Cells)
- **Supervisors:** Prof. Jenny Nelson & Prof. Donal D.C. Bradley, Dept. of Physics, Imperial College, University of London, UK.

Awards, Scholarships & Fellowship

- **Three National Awards:**
 - (i) **CVCD Excellence Award-2006** for the most Outstanding Young Researcher in Physical Sciences for the Year 2006 by the Committee of Vice Chancellors and Directors (CVCD), Sri Lanka.
 - (ii) **Presidential Award for Excellence in Research** by the President of the Democratic Socialist Republic of Sri Lanka. Years of Award – **2004- 2010 & 2017**.
 - (iii) **Young Scientist Award for the Year 2008** by SCOPUS, Elsevier Publisher, The Netherlands and National Science Foundation, Sri Lanka. (awarded to four talented scientists who attain a high level of excellence in research work in the any four fields from Biological Sciences, Chemistry, Engineering, Medicine, Physics, Mathematics).
- **General Commonwealth Scholarship (Open)**, Imperial College London, 2001-2004.
- **Royal Society Visiting Fellowship – 2008 for a collaborative research work at Imperial College London**
- **Commonwealth Fellowship – 2014 for a collaborative research work at Imperial College London**

Academic experience

- October 2017 – to-date, **Senior Professor in Physics**, University of Jaffna.
- October 2009 – October 2017, **Professor in Physics**, University of Jaffna.
- July 2008 - September 2008, **Visiting Academic Fellow**, Dept. of Physics, Imperial College London.
- November 2008 - October 2009, **Associate Professor in Physics**, University of Jaffna.
- May 2006 – July 2006, **Visiting Academic Fellow**, Dept. of Physics, Imperial College London
- March 2005- November 2008, **Senior Lecturer in Physics**, University of Jaffna.
- October 2004 - March 2005, **Research Associates**, Dept. of Physics, Imperial College London.
- December 1996- March 2005, **Lecturer in Physics**, University of Jaffna.
- December 1994- October 1995, **Assistant Lecturer in Physics**, University of Jaffna.

National level contribution

- Member/National Research Council, since February 2019 – February 2020.
- National coordinator/Annual Solar Eclipse outreach program on 26.12.2019 (<http://event.jfn.ac.lk/eclipse/index.php/organizing-committee/>, <http://project.jfn.ac.lk/hrncet/index.php/outreachties/>).
- Member/Expert Panel to advice on provision of points for research dissemination in the scheme of recruitment / promotion for the post of Associate Professorship / Professorship to UGC, 2018-2019.
- Member/Institutional Review Team, University of Moratuwa, 2019.
- Chairman/Member, Programme Review Teams, Univ. of Colombo, Kelaniya, Wayamba and Peradeniya 2018-2020.
- Member/Working Committee of the National Science Foundation on Basic Sciences since June 2016 – June 2019.
- Member/Standing Committee on Staff Develop., University Grant Council, since June 2011 to August 2018.
- Member/Task force for establishing a centre for Nanoscience and Nanotechnology.
- Member/Official ministerial delegation to the European Organization for Nuclear Research (CERN), Geneva, Switzerland for promoting collaborative research and higher education in the field of particle physics in Sri Lanka.
- Chief Examiner, Advanced Level National Examination in Physics, 2006–to date.

Contribution to the University Development

- Elected Council Member from the Senate, University of Jaffna, since November 2015.
- Chairman/University Research Committee, University of Jaffna, September 2016 to December 2018.
- Member/Board of Studies, University College Jaffna since September 2015.
- Alumni Officer/University of Jaffna, Jaffna, Since February 2007 - 2009.
- Head/Dept. of Physics, University of Jaffna, 2010 - 2016 <http://www.phy.jfn.ac.lk/>.
- Established two research laboratories by winning National and International grants, <http://project.jfn.ac.lk/hrncet/>.
- Upgraded infrastructure facilities for SDC by winning special grants from UGC from 2011-2018, <http://www.unit.jfn.ac.lk/sdc/>.

Research Grants

Won Investigator Driven Research Grants over 40 million rupees (USD 250,000) by National and International institutions for purchasing research equipment under the following research projects. Six projects were successfully completed.

Title of the Project	Investigator(s)	Period From To	Funding Agency	Amount (million LKR)
Optoelectronic properties of hybrid Metal oxide / Polymer Nanocomposites (since May 2005)	Dr.L.Jeyanathan(PI) Dr.S.Sivaraya Dr.P.Ravirajan	2000-2004 2000-2005 2005-2008	NRC	11.0
Low cost solar cells based on Nanocrystalline titanium dioxide and vegetable dyes	Prof.P.Ravirajan(PI)	2006 - 2009	IFS Sweden	1.5
Fabrication and Characterization of organic/metal oxides Nanostructured PV devices	Prof.P.Ravirajan(PI)	2006 - 2009	NRC	8.4
Characterization of Nanostructured polymer / Fullerene solar cells	Prof.P.Ravirajan(PI)	2007 - 2011	NSF	1.9
Improving the performance of Hybrid TiO ₂ / Polymer solarcell using interface modifiers	Prof.P.Ravirajan(PI)	2011-2015	NRC	8.0
Gel-Polymer Electrolytes for Sodium Batteries	Prof.P.Ravirajan(PI) Dr.K.Vignarooban Mr.S.Senthuran	2015-2019	NRC	5.0

Mega Grants won for collaborative research projects

Funded by the Minister of Science, Technology and Research

One of four chief writers and Deputy Directors of a Multi-institutional national level R & D and training project on Thin film Solar Cells towards manufacturing of Solar Panels which was initiated by the Minister of Science, Technology and Research that secured funds of **240 million rupees** for five years from 2017.

Funded by Norwegian Centre for International Cooperation in Education (SIU)

One of two chief writers and coordinators of a project titled 'Higher Education and Research collaboration on Nanomaterials for Clean Energy Technologies (HRNCET)' which secured funds of 4,7 million NOK (**97 million rupees**) for exchanging staff and students at master and PhD level as well as the development of a master programme within clean energy technology at the University of Jaffna (UoJ) for five years from 2017.

Funded by Royal Norwegian Embassy in Sri Lanka

One of two chief writers and coordinators of a project titled 'Capacity Building and Establishment of a Research Consortium in Nanomaterials for Clean Energy Technologies' which has been funded 6.2 million NOK (**LKR 129 million**) over a period of three years (2017-2019).

Key Publications and their citations

Total no. of citations **1815** (<https://www.scopus.com/authid/detail.uri?authorId=8161457500>)

2348 (<https://scholar.google.com/citations?user=l1wPmm8AAAAJ&hl=en>)

1. **Ravirajan, P**, S. A. Haque, J. R. Durrant, D. Poplavskyy, D. D. C. Bradley, and J. Nelson, *Journal of Applied Physics* **95** (2004) 1473 - 1480. **No. of citations 205.**
2. **Ravirajan, P**, S. A. Haque, D. Poplavskyy, J. R. Durrant, D. D. C. Bradley, and J. Nelson, *Thin Solid Film* **451-452** (2004) 624 - 629. **No. of citations 57.**
3. J. Nelson, J. Kirkpatrick, and **Ravirajan, P**, *Physical Review B* **69** (2004) 035337. **No. of citations 229.**
4. B. O. Aduda, **Ravirajan, P**, K. L. Choy, and J. Nelson, *International Journal of Photoenergy* **6** (2004) 141-147. **No. of citations 63.**
5. **Ravirajan, P**, D. D. C. Bradley and J. Nelson, *Advanced Functional Materials*, **15** (2005) 609 - 618. **No. of citations 210.**
6. **Ravirajan, P**, S. A. Haque, J. R. Durrant, S. J. P. Smith, J. M. Kroon, D. D. C. Bradley and J. Nelson, *Applied Physics Letter* **86**, (2005) 143101. **No. of citations 53.**
7. **Ravirajan, P**, A. M. Peiró, M. K. Nazeeruddin, M. Graetzel, D. D. C. Bradley, J. R. Durrant and J. Nelson, *Journal of Physical Chemistry B* **110** (2006), 7635-7639. **No. of citations 585.**
8. A. M. Peiró, **Ravirajan, P**, K. Govender, D. Smyth-Boyle, P. O'Brien, D.D.C. Bradley, J. Nelson J. R. Durrant, *J. Material Chemistry* **16** (2006) 2088-2096. **No. of citations 295.**
9. Bouclé, J., **Ravirajan, P.**, Nelson, J, *Journal of Materials Chemistry* **17** (2007), pp. 3141-3153. **No. of citations 361**
10. T. Ishwara, **Ravirajan, P**, *at el.*, *Appl. Phys. Lett.* **92** (5), (2008) 053308. **No. of citations 50.**
11. Loheeswaran, S., Thanihaichelvan, M., **Ravirajan, P.**, Nelson, J. *Journal of Materials Science: Materials in Electronics*, (2017) **28:4732-4737. No. of citations 10.**
12. K Prashanthan, T Thivakarasarma, **Ravirajan, P**, M Planells, N Robertson, and J. Nelson, *Journal of Materials Chemistry C* **5** (45), 11758-11762 (2017). **No. of citations 17.**
13. K Balashangar, S Paranthaman, M Thanihaichelvan, PA Amalraj, D. Velauthapillai, **Ravirajan, P**, *Materials Letters* **219**, 265-268 (2018). **No. of citations 06.**
14. Thanihaichelvan M, Loheeswaran S, Balashangar K, Velauthapillai D, **Ravirajan, P**, *Polymers* **11**(3) 460(2019). **No. of citations 07.**
15. Pitchaiya, S., **Ravirajan, P.**, Velauthapillai, D., *et al.*, *Scientific Reports (Nature Publisher Group)*, **10** (1), 6835 (2020), DOI: 10.1038/s41598-020-62900-4.