



## Department of Physics Faculty of Science / University of Peradeniya



### Prof. L.R.A.K. Bandara

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### About Me

I was born in Kandy and educated in Gelioya Maha Vidyala, Gelioya and Dharmaraja College in Kandy. Graduated in 1994 with B.Sc.(special) Degree in Physics from University of Peradeniya, Sri Lanka. Joined with the Solid State Ionics research group of Department of Physics, University of Peradeniya in 1995. Started research career on Ion Conducting Polymers under the supervision of Prof. M.A.K.L. Dissanayake. In 1995, awarded a fellowship by the International Programme for Physical Sciences, Uppsala, Sweden for a period of two years to carry on the Ph.D. studies at the Chalmers University of Technology, Sweden. Completed the Ph.D. with the title "Synthesis, characterization and electrical properties of some solid polymer electrolytes based on poly(ethylene oxide), PEO" in the year 2000. Joined the Department of Physics as a Senior Lecturer (contract) in year 2000 and became the Senior Lecturer (Grade II) in 2001. In 2007/2008, awarded a Post-Doctoral Position under cultural exchange programme offered by French Embassy of Sri Lanka for a period of 09 months to conduct Research at LEPMI, Grenoble Institute of Technology, France. Became the Senior Lecturer (Grade I) in 2011 and received merit promotion to the post of Professor in Physics in 2017.

### Higher Education Qualifications

🎓 PhD

University of Peradeniya  
Sri Lanka  
(2000)

🎓 BSc

University of Peradeniya  
Sri Lanka  
(1994)

## Awards, Scholarships, Memberships & Fellowships



Presidential Research Awards 2014 for the research papers titled "A novel Gel Polymer Electrolyte based on Polymethylmethacrylate and Copper Trifluoromethanesulfonate"



Presidential Research Awards 2014 for the research papers titled "Efficiency enhancement by mixed cation effect in dye-sensitized solar cells with a PVdF based gel polymer electrolyte"



Merit Award for Scientific Publication - 2013 by National Research Council (NRC) for the research paper titled "Efficient solid-state dye-sensitized n-ZnO/D-358 dye/p-CuI solar cell"



Presidential Research Awards 2006 for the research paper titled "Thermal and electrical properties of solid polymer electrolyte PEO9 Mg(ClO<sub>4</sub>)<sub>2</sub> incorporating nano-porous Al<sub>2</sub>O<sub>3</sub> filler"



Presidential Research Awards 2004 for the research paper titled "Photoelectrochemical solar cells with polyacrylonitrile – based and polyethylene oxide-based polymer electrolytes"



Presidential Research Awards 2002 for the research paper titled "A novel gel polymer electrolyte based on polyacrylonitrile (PAN) and its application in a solar cell"



Best presentation in the category of presentations by postgraduate researchers at the Annual Research Sessions 1998

## Positions Held

-  Director, Science Education Unit- (September 2019 - August 2022)
-  Chairman, Faculty Research Committee- (June 2018 - May 2021)
-  Head of the Department, Department of Physics- (January 2015 - January 2018)
-  Head of the Department, Department of Physics- (January 2012 - January 2015)
-  Chairman, Board of Study in Physics- (February 2013 - January 2018)
-  Secretary of the Board of Study in Physics- (01-02-2008 to 31-01-2012)

## My Teachings



PH245: Electronics Theory I

## Research Interests (Research Fields/ Projects)

Solid State Ionics

Materials, Polymer Electrolytes, Dye-sensitized solar cells, Li-rechargeable batteries, Dielectric properties of materials

## Ongoing Research and Projects



Nothing to show under this subheading !!!

## Key Publications



Electrochimica Acta - (1998)

Ionic conductivity of plasticized (PEO)-LiCF<sub>3</sub>SO<sub>3</sub> electrolytes



Materials Research Bulletin - (2002)

A novel gel polymer electrolyte based on polyacrylonitrile (PAN) and its application in a solar cell

## Conferences



Nothing to show under this subheading !!!

## My Publications

Please goto the website.

<https://sci.pdn.ac.lk/physics/staff/Kalinga-Bandara>