

Durgaprasad D. Ramteke

 ddphyvnit@gmail.com

 [linkedin.com/in/durgaprasad-d-ramteke-a2394a183](https://www.linkedin.com/in/durgaprasad-d-ramteke-a2394a183)  <https://www.ddramteke.com/>

Summary

An avid research problem-solver dedicated to science, specialist in Condensed Matter Physics and Material Science. After finishing my PhD from India, I've parked my vehicle at research labs in South Africa, Slovakia, Italy, and Finland (at present Oulu). I am also working on a purpose driven product to make sustainability profitable and mainstream. This is my next challenge, and it will provide me a daily spot to park my vehicle.

Experience



Researcher

University of Oulu

2020 - Present (3 years)

Towards CO₂-utilizing Cement: Assessing the Characteristics and Performance of Nanostructured Glass for Cements



Researcher

Centre for Functional and Surface Functionalized Glass, Alexander Dubček University of Trenčín

May 2018 - Feb 2020 (1 year 10 months)

"Development of monolithic and porous glass-ceramics from inorganic waste and recycled glasses".

Main goal of the project is to utilize the inorganic or industrial glass for the synthesis of ceramics waste. This can be achieved by dissolving the starting material (waste) in the alkali environment to form gel (gelification). By sintering at different temperatures, the ceramic can be obtained from the gel. This process of ceramic synthesis is also helpful in leaching of hazardous elements (e.g. Cr, Mo, V etc.) and organic compounds.



Visiting Researcher

Università degli Studi di Padova

Nov 2018 - Nov 2019 (1 year 1 month)



Postdoctoral Researcher

University of the Free State

Feb 2015 - Dec 2017 (2 years 11 months)

"Preparation and characterization of glasses and phosphor light emitting diode (LED) applications"

Glasses: Glasses are one of the interesting and widely known materials. Glasses offer a broad range of composition, homogeneity, easy formability in any shapes and size. Goal is to incorporate various rare earths specially Dy³⁺, Sm³⁺ and Nd³⁺ ions in the different glass composition for LED and solar cell applications.

Phosphor: Investigation of new phosphor materials to avoid color aberration in multi-color phosphor display. Silicate materials has a high melting point and offers great chemical and thermal stability. Work focuses on the silicate phosphor.



PHD Scholar

Visvesvaraya National Institute of Technology

Apr 2009 - Sep 2014 (5 years 6 months)

“Synthesis and characterization of lithium –borate glasses containing rare earth oxides”

Rare earth glasses are excellent luminescence materials because of their emission efficiencies due to 4f-4f and 4f-5d electronic transitions in the REⁿ⁺. Occurrence of sharp fluorescence in ultraviolet (UV) to the infrared region is due to shielding effects of the outer 5s and 5p orbitals on the 4f electrons. These glasses have potential applications as plasma display panel, semiconductor light emitting diodes, solid state lasers, X-ray medical radiography, optical amplifiers, etc. PhD is a detailed account of the investigations carried out on the preparation, structural properties, electrical properties, absorption study, energy band gap and luminescence properties of lithium borate glasses containing different REO's.

Education



Visvesvaraya National Institute of Technology

Doctor of Philosophy - PhD, Glasses and Material Science

2009 - 2014

Skills

Building Materials • Carbon Capture, Utilisation and Storage (CCUS) • Carbonation • Cement • Rare Earths • Glass • Ceramic • Phosphor • Luminescence • foam glass

Honors & Awards



University of the Free State postdoctoral fellowship 2015 for foreign researcher -

University of the Free State

Feb 2015



Knowledge, Interchange and Collaboration (KIC) - National research foundation,

Dept. of Science and Technology, Republic of South Africa

Apr 2015



International Travel Support fellowship from Science & Engineering Research

Board (SERB) - Science & Engineering Research Board (SERB), Government of India

Mar 2014



International Travel Support fellowship from Science & Engineering Research

Board (SERB) - Science & Engineering Research Board (SERB), Government of India

Jun 2014

To attend "17th International Conference on Luminescence and Optical Spectroscopy of Condensed Matters (ICL'14)" July 13-18, 2014, University of Wroclaw, Poland.