



Welcome to Research Group of Dr. M.Ravi @ CSIR-NIIST



“Our research focus is in the area of light weight high strength aluminum alloy development for aerospace and automotive applications.



Senior Principal Scientist,
Metallic Materials Activity,
Office: Room 205, Bhatnagar
Block, Material Science and
Technology Development Section,
MSTD, CSIR-NIIST, Industrial
Estate Thiruvananthapuram.
Email: ravi@niist.res.in ,
manickravi@yahoo.com
Mobile No: +91-9947140255
CSIR-NIIST Profile:
<http://niist.irins.org/profile/13401>

Education

- 1981 –1985 **B.E (Metallurgy),**
University of Madras.
1991 –1994 **M.Sc.(Engg.) (Metallurgy)**
Indian Institute of Science.
2003 **Ph.D, (Metallurgy),**
Indian Institute of Science.

Professional Information

- 1986–1989 **Asst. Engineer (Methods),**
Hindustan Aeronautics Limited,
Koraput Division, Orissa.
1989–Till **Scientist: CSIR-National Institute for**
Interdisciplinary Science and
Technology (CSIR-NIIST). And
2012 onwards
Senior Principal Scientist,

Broad Areas of Interest

- Solidification of Metals and Alloys.
- Mechanisms of Microporosity Formation in Castings
- Aluminium Alloy Development.
- Structure-Property Correlations.
- Quantitative Metallography.
- Technology Development of Advanced Materials for Aerospace and Automotive Applications.

AcSIR Course Teaching

Past and Present Group Members

Open Position for Ph.D Program

Interested students can apply through AcSIR Ph.D Program



Welcome to Research Group of *Dr. T.P.D. Rajan @ CSIR-NIIST*



Area of Research: Composite Materials, Functionally Graded Materials, Light Alloys, Metal Casting, Nanomaterials, Surface Coating and Technology.



Dr. T.P.D. Rajan
Principal Scientist

Materials Science and
Technology Division (MSTD)
CSIR-National Institute for
Interdisciplinary Science and
Technology (NIIST),
Trivandrum - 695 019
Phone: 0091-471-2515327;
Mobile: 0091-9447035439
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tpdrajan@gmail.com

Thesis guidance

- Ph.D. guided – 9 Nos.
- Ph.D. ongoing – 4 Nos.
- Master Thesis - 27 Nos.

Publications & Patents

- Research Papers – 126
- Book Chapters – 6
- Patents – 2

Google Scholar Citation

<https://scholar.google.com/citations?user=fCWtCIUAAAAJ>

AcSIR Courses

- Materials Characterisation
- Composite Materials
- Surface Science and Technology
- Physical Metallurgy

Education

- Ph.D., CSIR-National Institute for Interdisciplinary Science and Technology, Trivandrum, Metallurgical and Materials Engineering
- M.Tech., National Institute of Technology, Surathkal, Mangalore, Metallurgical Engineering
- M.Sc., MS University, Chemistry

Research Experience

CSIR - National Institute for Interdisciplinary Science and Technology, Trivandrum

- Senior Research Fellow - (Sept. 1996 - Mar. 2000)
- Research Associate – (Apr. 2000 - Jan 2003)
- Principal Investigator – (Jan. 2003 – April 2005)
- Scientist – (April 2005 – April 2009)
- Senior Scientist – (April 2009- April 2013)
- Principal Scientist (since April 2013)

Award and Honours

- Award for Excellence in Corrosion Science and Technology conferred by NACE International, Mumbai (2018).
- Editor, Transactions of Indian Institute of Metals, Springer (2018)
- IIM Nalco Gold Medal, The Indian Institute of Metals (IIM) (2015)
- Chandran Menon Memorial Award for Applied Research and Innovative Technology, Institute of Indian Foundrymen (IIF), Kolkata (2015)
- IIF Industry Research Award, The Institute of Indian Foundryman, Calcutta (2009)
- INAE Innovation Potential Award, Indian National Academy of Engineering, New Delhi for the Best Doctoral thesis in Engineering at all India level (2003)
- Soli-Commissariat Award, Institute of Indian Foundryman, (1999)
- UKIERI Honorary Visiting Researcher - for visiting Universities of Bradford, Oxford, Leeds and Brunel, United Kingdom (2014)
- Young Scientist Fellowship, Dept. of Science and Technology, New Delhi, (2002)
- IIM Metallography Awards, Indian Institute of Metals (IIM) (2005 and 2006)
- EMSI Micrograph Awards, Electron Microscopy Society of India (EMSI) (2002, 2004 and 2006)

Selected Publications

- International Materials Review, 2018, 63:8, 488-512
- Surface and Coatings Technology, 2018, 356, 29-37
- Journal of Alloys and Compounds, 2017, 712, 394-405
- Metallurgical and Materials Transactions A, 2017, 48: 279-279-293
- Journal of Physical Chemistry C, 2017, 121 (28), pp 15154–15159
- Progress in Organic Coatings, 2017, 111, 294–314
- Journal of Composite Materials, 2016; 50(16) 2255-2269
- Physical Chemistry Chemical Physics, 2016, 18, 7367
- Materials and Design, 2015, 88, 1201–1209

Open Position for Ph.D. Program: Interested students in the disciplines of Chemical Science and Engineering Sciences can apply for Ph.D. Program of AcSIR



Dr. Satyajit Vishnu Shukla
Principal Scientist and
Associate Professor

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Materials Science and Technology Division (MSTD)
CSIR-National Institute for Interdisciplinary Science and
Technology (NIIST)
Council of Scientific and Industrial Research (CSIR)
Industrial Estate P. O., Pappanamcode
Thiruvananthapuram - 695019, Kerala
Phone: +91-471-2515385
Mobile: +91-9567414352
E-mail: satyajit_shukla@niist.res.in

❑ Research Interest

- Dye-Removal Technologies (Advanced Oxidation Process, Adsorption, Photocatalysis)
- Magnetic nanocomposites (Core-Shell, Nano-Nano / Micro-Nano Integrated)
- 1-D Nanostructures (Nanotubes, Nanobelts, Nanofibers)
- Hydrogen Technology (Sensors, Separation Membranes)
- Process Development (Hydrothermal, Ion-exchange, Sol-Gel, Electrospinning, Thermal Evaporation)

❑ Research Experience

▪ 2015-Till Date	Principal Scientist	CSIR-NIIST, Thiruvananthapuram
▪ 2011-2014	Senior Scientist	CSIR-NIIST, Thiruvananthapuram
▪ 2008-2010	Scientist	CSIR-NIIST, Thiruvananthapuram
▪ 2006-2007	Scientist "Fellow"	CSIR-NIIST, Thiruvananthapuram
▪ 2002-2006	Research Associate	University of Central Florida, Orlando, U.S.A.

❑ Qualification

▪ 2002	Ph.D. (Materials Science and Engineering)	University of Central Florida, Orlando, U.S.A.
▪ 1996	M.Tech. (Materials Science and Engineering)	Indian Institute Technology Mumbai, Bombay
▪ 1994	B.E. (Metallurgy)	Savitribai Phule Pune University, Pune

❑ Patents

- International = 7 (U.S.A., Japan, Australia, Germany, P.R. China, Taiwan)
- India = 1

❑ Publications

- Peer Reviewed Journals = 72; Book / Encyclopedia Chapters = 5; Average Impact Factor = 2.738
- Google Scholar Citations = >3175; *h*-index = 27

❑ Ph.D. / M.Sc. / M.Tech.

- Ph.D. = 2; M.Sc. / M.Tech. = 26

❑ Awards / Recognition

- India-US Science and Technology Forum (IUSSTF) Research Fellowship Award, Engineering Sciences, 2009
- CSIR Young Scientist Award, Engineering Sciences, 2008

❑ Life Membership

- Society of Environmental Chemistry and Allied Sciences (SECAS)
- Materials Research Society of India (MRSI)
- Indian Ceramic Society (InCerS)
- Indian Institute of Metals (IIM)

❑ Open Positions

- Students from Chemical or Engineering Sciences may apply for Ph.D. Program.



Our research focus is in the area of Beach sand minerals research, Extraction of Ti, TiO₂ and rare earth materials by hydro and pyrometallurgical route, Carbon based materials (Graphene, Activated carbon) from minerals and waste materials, Recovery of precious metals, rare metals and other valuable materials from e-waste and Industrial wastes.



Education:

- **PhD (Particulate materials)** from the Department of Metallurgical & Materials Engg., Indian Institute of Technology (IIT) Kharagpur, India (2014)
- **B. E (Metallurgical Engineering)** from Govt. college of Engg, Salem (2002)

Employment history:

- June 2017 to Continue, Principal Scientist, Material Science and Technology Division, CSIR-National Institute for Interdisciplinary Science and Technology Thiruvananthapuram
- Sept 2015 to May 2017, Principal Scientist, Advanced Materials Technology Department, CSIR-Institute of Minerals & Materials Technology, Bhubaneswar
- Sept 2011 to Aug 2015, Senior Scientist, Advanced Materials Technology Department, CSIR-Institute of Minerals & Materials Technology, Bhubaneswar.
- Sept 2007- Aug 2011, Scientist, Advanced Materials Technology Department CSIR-Institute of Minerals & Materials Technology, Bhubaneswar.
- Aug 2004- Aug 2007, Junior Scientist, Advanced Materials Technology Department, CSIR-Institute of Minerals & Materials Technology, Bhubaneswar

Principal Scientist & AcSIR Associate Professor

Office: Beach Sand Minerals Lab, Minerals & Metallurgical Materials Section, Materials Science and Technology Division, CSIR-NIIST, Industrial Estate Thiruvananthapuram
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Tel. No: 0471-2515313
Res. No: 0471-2493336
Mobile No: 919778060563

<http://niist.irins.org/profile/64966>

Google Scholars link :
https://scholar.google.co.in/citations?hl=en&user=rc_1zuEAAA&view_op=list_works&sortby=pubdate

Research gate profile:
https://www.researchgate.net/profile/Jayasankar_Kalidoss

Total Papers (SCI) : 40
 Patents : 6

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Broad Areas of Interest:

- Value addition to Titanium bearing minerals: Titanium, Synthetic rutile, Ferro Titanium, TiC and TiCN
- Precious metals and rare metal recovery by pyro-hydrometallurgy route
- Rare earth based materials (Extraction and applications)
- Mechanochemistry (bulk synthesis of nanomaterials and composites from minerals/ ore and waste materials)
- Industrial waste utilization (red mud, fly ash, slag) for recovery of materials

Key Publications:

- Ceramics International Vol.35 (2009) p 3103–3109.
- International Journal of Minerals, Materials and Metallurgy, 19 (8), 2012.
- Powder Technology, Volume 262, (2014), Pages 162-169.
- Journal of Alloys and Compounds 647 (2015) 1040-1047.
- Materials Chemistry and Physics 171, 195-200 (2016)
- Royal Society of Chemistry (RSC) Advances., 6, 20067–20073 (2016)
- Journal of Electronic Materials , DOI: 10.1007/s11664-016-5125-x , 2016.
- Separation Science and Technology, <https://doi.org/10.1080/01496395.2018.1539107>
- Waste Management, Volume 64, June 2017, Pages 182-189 (2017).
- Journal of Photochemistry and Photobiology B: Biology 140 (2014) 69–78.

Past and present Group Members:

Past	Present
PhD- 1 M.Tech- 2 M.Sc-1	Nil

Open Position for Ph.D. Program : Interested students can apply through AcSIR Ph.D Program



Senior Scientist/ Assistant Professor

Materials science and Technology
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srininiist@gmail.com

Thesis Guided

Ph.D: Completed: 01
Ongoing: 03
M. Tech/M.Sc: 32

AcSIR Courses

ENG-NIIST-3-4110 : Advanced
Foundry Technology
ENG-NIIST-3-4105: Light and Rare
Earth Alloys and Composites
ENG-NIIST-2-4103 : Physical
Metallurgy

Present Group Members

Mr. Jithu Jayaraj
Mr. Arun Kumar
MR. Rajesh Kumar K.R

Area of Interest

Structure property correlation of alloys
Solidification and grain refinement
High temperature behavior - Creep
Corrosion and Coatings
Biodegradable Implants

Educational Details

Ph.D in Materials Science and Technology
Cochin University of Science and Technology, Kerala, India
Master of Engineering in Production Engineering
Annamalai University, Tamil Nadu, India
Bachelor of Engineering in Mechanical Engineering
Madras University, Tamil Nadu, India

Professional Information

Helmholtz-Zentrum Geesthacht, Germany, Post Doc Fellow: July 2010 to August 2012
CSIR-NIIST, Trivandrum, India, Sr. Scientist: June 2012 to to date
CSIR-NIIST, Trivandrum, India, Scientist: June 2008 May 2012
CSIR-NML, Jamshedpur, India, Jr. Scientist: September 2005 to June 2008
CSIR-NIIST, Trivandrum, India, SRF: December 2002 to August 2005

Publications

SCI Journals: **52**
Microstructure and mechanical properties of Si and Sb added AZ91 magnesium alloy. Metallurgical and Materials Transaction A 36A, 2005, 2235-2243.
Hot tearing characteristics of binary Mg-Gd alloy castings, Metallurgical and Materials Transactions A, 44A, 2012, 2285-2298.
Creep behavior of Mg–10Gd–xZn (x=2 and 6 wt%) alloys, Materials Science and Engineering A, 649, 2016, 158-167

Composite magnesium phosphate coatings for improved corrosion resistance of magnesium AZ31 alloy, Corrosion Science, 113, 2016, 104-115

Tensile and fracture toughness behavior of ultrafine grained Mg-4Zn-4Gd alloy processed through hot rolling followed by hot pressing, Materials Science & Engineering A 742, 2019, 318–333



Welcome to Research Group of Dr Sreeja Kumari S S @ CSIR-NIIST



Research Focus: Our group research activity spans surface engineering, advanced nanomaterials, functional coatings, Light Alloys and Composites and Structure-property correlation. We are now developing graphene based membrane for water desalination from graphite ore.



Scientist

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sreejakumariss@gmail.com

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Mobile: 91-9442217259

<http://www.niist.res.in/sreejaKumariss>

- Life Member, Indian Institute of Metals
- Member, Indian Institute of Foundrymen
- Member, Materials Research Society of India

Present Members:

Ms Aswathy S Nair

Mr Yedhu Krishnan

Mr Prasanth K

Ms Neenu Manohar

Ms Nitya Babu

Education

2007- Ph.D. Materials Engineering

CSIR- National Institute for Interdisciplinary Science and Technology, Trivandrum, India (CUSAT, Cochin)

1999-M.Tech, Metallurgy

National Institute of Technology, Surathkal

(Former Karnataka Regional Engineering College, Surathkal)

1995-M.Sc, Chemistry

Madras Christian College (University of Madras)

Professional Information

2012-2017 Scientist at CSIR- Central Electrochemical Research Laboratory (CECRI), Karaikudi

2017 Onwards Scientist at CSIR- National Institute for Interdisciplinary Science and Technology (NIIST), Thiruvananthapuram

Broad Area of Interest

- Biomimetic and Smart coatings
- Advanced Materials
- Light Alloys and Composites,
- Structure-property correlations

Recognition

- DST Fast Track Young Scientist Fellowship
- CSIR- Research Associate Fellowship
- CSIR - Senior Research Fellowship
- GATE Fellowship for Postgraduate studies in Engineering
- Honorarium Award-Maney Publishing

AcSIR Course Teaching

CHE-NIIST-3-4125 Surface Science and Technology

Open Position for Ph.D Program

Interested students can apply through AcSIR Ph.D Program



Welcome to Research Group of Mr. Dhani Babu T @ CSIR-NIIST



“Our Research focusing on the development of sustainable technologies on water and wastewater treatment and reuse. pollution prevention, resource recovery of waste, Materials for environmental applications, sustainability and environmental safety.”



**Scientist &
AcSIR Assistant Professor**

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Industrial Estate,
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dhani811@niist.res.in

Tel No: 0471-2515224

Mobile No: 919439621861

Website:

<https://www.niist.res.in/english/scientists/dhani-babu-t/educational-details.html>

Google Scholar Link:

<https://scholar.google.com/citations?user=QnqgX2UAAAAJ&hl=en>

Education

2011-2013 M. Tech. (Chemical Engineering)

National Institute of Technology Rourkela

Professional Information

2007 – 2008 Graduate Engineer Trainee

Projects Department, Hetero Drugs Limited

2009-2011 Research Fellow

CSIR- Central Electrochemical Research Institute,

Tamil Nadu, India

2014-2018 Engineer (Chemical)

Monazite Process Plant, Indian Rare Earth Limited

(Department of Atomic Energy), India

August 2018 Scientist, AcSIR Assistant Professor

Engineering Science, ETD, CSIR-NIIST,

Thiruvananthapuram, India

Broad Areas of Interest

- Process development, Design and optimization
- Project Execution, Erection and Commissioning
- Mathematical Modelling and Simulation
- Beach sand mineral beneficiation, CO₂ Sorption
- Air, Water and Waste water treatment

AcSIR Course

- Mathematics for Engineers and Scientists
- Industrial Effluent Treatment and Disposal
- Environment assessment, monitoring, protection and management



Welcome to Research Group of Dr. Partha Kundu @ CSIR-NIIST



“Our research focus is in the area environmental engineering and waste management. Research objective is to develop sustainable process to mitigate environmental issues. We are actively working in the solid waste management and converting waste to energy/wealth. We are working in process development for industrial effluent treatment and development of novel materials for reclamation of contaminated drinking water. Also we are working on purification of contaminated gaseous steam, air pollution control and mitigation”



**Sr. Scientist &
AcSIR Assistant Professor**

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<https://www.niist.res.in/english/scientists/partha-kundu/personal.html>

Publications
Google Scholar Link:
https://scholar.google.co.in/citation_s?user=X0NPqmgAAAAJ&hl=en

Research Gate:
https://www.researchgate.net/profile/Partha_Kundu4/contributions

Education

2011-2016 **PhD (Chemical Engineering)**, IIT Roorkee.
2009-2011 **M.Tech (Chemical Engineering)**, IIT Roorkee.
2006-2009 **B.Tech (Chemical Engineering)**,
University of Calcutta
2002-2006 **B.Sc (Chemistry Honours)**,
Scottish Church College,
University of Calcutta.

Professional Information

June 2018 to Present
Sr. Scientist & AcSIR Assistant Professor
Environmental Technology Division (ETD),
CSIR-NIIST, Thiruvananthapuram, India
July 2017-December 2017
Indo-Canadian Post-Doctoral Fellow
Faculty of Engineering and Applied Science,
PTRC, University of Regina, Canada
June 2016-December 2016
Research Associate
Hindustan Petroleum Corporation limited (HPCL)
R&D Centre, Bangalore, Karnataka, India.

Broad Areas of Interest

Energy & Environmental Engineering, Pollution
abatement, Waste management, Advance
separation process, Modeling & Simulation,
Nanotechnology.

Professional Memberships

Life Member, Indian Institute of Chemical Engineers
Life Member, The Institution of Engineers (India) (IEI)

AcSIR Courses

Environmental Sciences.
Industrial effluent treatment and disposal.

Open Position for Ph.D Program

Interested students can apply through AcSIR Ph.D Program

Motivated students can also apply anytime throughout the year for M.Tech/M.Sc project