

Brief Bio-data

1. Name: Dr. M. S. Santosh

2. Date of Birth: 15 – 02 – 1985

3. Current Position and Address (Include Email ID and Contact Number)

Senior Scientist

Coal and Mineral Processing Division,

CSIR – Central Institute of Mining and Fuel Research (CIMFR)

F.R.I, Post Office, Dhanbad, Jharkhand 826015.

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4. Educational qualifications: (Graduation and above)

Sl. No.	Degree	Year of Passing	University/Institute	Subject
1.	B.Sc	2005	APS College of Arts and Science, Bangalore	Physics, Chemistry and Mathematics
2.	M.Sc	2007	VV Puram Science College, Bangalore	Chemistry
3.	Ph.D	2011	National Institute of Technology Karnataka (NITK), Surathkal	Chemistry

5. Work experience:

Designation	Institute/company	From	To	Nature of Work
Associate Professor	CIIRC-Jyothy Institute of Technology, Bangalore	01/08/2016	13/08/2021	Research and Teaching
Assistant Professor	Jain University, Ramanagara	09/06/2014	31/07/2016	Research and Teaching
Assistant Professor	Al-Ameen Arts, Science and Commerce College, Bangalore	24/06/2013	07/06/2014	Postgraduate Teaching & Departmental Administration
Lecturer (On Contract)	Visvesvaraya Technological University	08/02/2013	22/06/2013	Postgraduate Teaching
Senior Faculty	Academy for Creative Teaching	20/10/2011	31/12/2012	Teaching, Training, Skill Development, Handholding of Schools and Colleges

6. Work Area(s)/ Specialization: Nanomaterials & Coatings, Energy Storage, Water Treatment, & Biosensors

7. Major contributions: (Max. 100 words): Have developed new materials and membranes for water treatment, hydrogen production, Haemostatic Material, Biosensors for the detection

of Alzheimer's Disease and other pathogenic bacteria, Hydrophobic and Antiviral Nanocoatings for solar panels and masks, Electrode Materials for battery and supercapacitors.

8. No. of Research Publications:

- **Papers in Journals:** 67
- **In conference proceedings:** 01
- **Invited lectures delivered:** >75
- **List of best 05 publications**

1. VG Dileepkumar, C Pratapkumar, Ramarao Viswanatha, Basavanakote M Basavaraja, Rapela R Maphanga, Madhu Chennabasappa, Narasimha Srinivasa, Siddaramanna Ashoka, Zhong Chen, Sami Rtimi, Kolleboyina Jayaramulu, Rajendra S Varma, Gyorgy Szekely, Mysore Sridhar Santosh. "Nanostructured NaFeS₂ as a cost-effective and robust electrocatalyst for hydrogen and oxygen evolution with reduced overpotentials", **Chem Eng J**, 426 (2021)131315.

2. HN Sumedha, M Shashank, Fahad A Alharthi, Mysore Sridhar Santosh, BM Praveen, G Nagaraju. "Synthesis of novel pseudo-capacitive perovskite nanostructured flowerlike KTaO₃ for lithium ion storage", **Int. J. Hydrog. Energy**, 46 (2021) 28214-28220.

3. R Ashwini, Zinia Mohanta, MK Punith Kumar, Mysore Sridhar Santosh, Chandan Srivastava. "Enhanced heterogeneous electron transfer kinetics in Graphene Oxide produced from mechanically milled Graphite", **Carbon Trends**, 5 (2021) 100095.

4. Anarghya Dinesh, Mylarapattana Shankaranarayana Anantha, Mysore Sridhar Santosh, Muniswamy Narendra Kumar, Krishna Venkatesh, Handanahalli Basavarajaiah Muralidhara. "Nitrogen-doped carbon spheres-decorated graphite felt as a high-performance electrode for Fe based redox flow batteries", **Diam. Relat. Mater.** 116 (2021) 108413.

5. Mandira Majumder, Mysore Sridhar Santosh, Ramarao Viswanatha, Anukul K Thakur, Deepak Dubal, Kolleboyina Jayaramulu. "Two-dimensional Conducting Metal-Organic Frameworks Enabled Energy Storage Devices" **Energy Storage Mater.** 37 (2021) 396-416.

- **Books/Chapters authored/edited:** 02

9. List of 5 Major Contract R&D Projects:

Grant Agency	Title of the project	Amount	Role
DST (ERA-NET MICALL19)	Development of Advanced Composite Pressure Vessels for Hydrogen Storage	1,56,00,000	Consortium Lead PI
DST	Development of Cost-Effective New Catalyst Technologies for High Performance Polymer Electrolyte Membrane Fuel Cells	Rs. 11,10,000	PI

DST	Hydrogen powered desalination system using recycled aluminum: A novel process to extract potable fresh water from seawater	Rs. 45,20,780	Joint PI
SERB (ASEAN-India Joint STI Program)	Development of Novel Multi-functional Nano-structured Materials for the Photo-catalytic Degradation of Emerging Pollutants	Rs. 29,01,560	PI
DST (India – Belarus Project)	Development of Novel Hybrid Composites for Bone Plastics Based on Biocompatible Calcium Phosphates and Biopolymers	Rs. 10,40,000	PI

10. (a) Name of Patents/Copyrights applied /granted/commercialized: NIL

(b) Technologies/Products /knowhow/Services developed: Antiviral Nanocoating Developed and Technology Transferred to M/s. Medisys, Chennai

11. Honors/Awards/Recognitions/Fellowships/Scholarships/Professional Memberships received:

- Selected for TWAS-DST-NIAS Science Diplomacy Program 2020.
- Was **featured** in Doordarshan Chandana's "Shubhodya Karnataka" and "Belagu" Programs in 2019 and 2015 respectively.
- Won the **First Prize** in the **Idea Contest conducted by the Atal Incubation Centre** for our concept "Reusable Personal Urinal for Women in Rural Areas and Low-Resource Settings".
- Invited Delegate for the **Japan - Asia Youth Exchange Program** (Sakura Science Program) held at Miyazaki University, Japan in December 2018.
- Member of the Indian Delegation to **BRICS Young Scientist Conclave** held at Hangzhou, China - 2017
- **Won the Open International Grant Competition - 2017** of the National University of Science and Technology (MISiS), Russia, designed to invite Leading Scientists for Short Term Joint Research Projects.
- **Delivered Dr. S. Krishnamurthy and Prof. B.S. Sheshadri Memorial Lectures - 2017** organized by the Electrochemical Society of India.
- **Won the BIRAC GYTI - SRISTI Award of Appreciation 2017** for the "Development of a Rapid First Aid Solution using a Novel Hemostatic Material".
- **Invited Member of the British Deputy High Commission's Inward Delegation to UK Universities** in March 2017.
- Recipient of the **Commonwealth Professional Fellowship - 2014** at **Loughborough University, UK.**
- Recipient of the **Hungarian Scholarship** for Short-Term Research Work at **University of Szeged, Hungary – 2014.**
- Recipient of Indian Academy of Science's **Summer Research Fellowship - 2014.**
- **Invited Member of the Visvesvaraya Technological University-National Design and Research Forum's Scientific Delegation** to Canadian Universities during October 2013.

- **DST Fast Track Young Scientist Award 2013** by the Department of Science and Technology, Government of India.
- Recognized as **Global Shaper of Karnataka - 2012** by the World Economic Forum.
- Won the **IUPAC's International Association of Chemical Thermodynamics Junior Researcher Award** for Research Excellence in Thermodynamics in 2010.
- **Invited Speaker** to the International Association of Chemical Thermodynamics Conference 2010, held at Tsukuba, Japan.
- **Swedish Institute Guest Scholar** in the Molecular Modeling and Theoretical Chemistry Group, **Stockholm University, Sweden** from September 2009 – February 2010.

12. Societal Contributions: Have conducted several hands-on science experiments workshops for students ranging from Primary School to Postgraduate Level and also trained Teachers at different levels on Pedagogy, Science, Skill Development, Effective Communication, Leadership