



Dr Sundar Mayavan
Principal Scientist

Contact

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Academic Qualifications

B.Tech (Chem. Engg), M.S (by Res.), Ph. D in Material Science & Engineering

Experience

18 Years

Research Experience

16 Years

Additional Responsibilities

1. Quality Manager of CSIR-Battery Performance Testing and Evaluation Centre (BPTEC)
2. Deputy Technical Operating Manager of CSIR-BPTEC
3. Skill Development / Refresher Course Technical Co-ordinator for Lead Acid Batteries

Areas of Research

1. Nano Carbon Additives for lead acid batteries
2. Batteries for Solar application
3. Batteries for Telecom Application
4. Batteries for e-Rickshaw
5. Lead acid battery testing & Evaluation
6. Battery Failure analysis
7. New Additive evaluation for lead acid batteries

Research Supervision / Guidance

Program of Study		Completed	Ongoing
Research	PDF		
	Ph.D.	2	1
	M.Phil.		
Projects	PG	5	

Publications

International		National		Others
Journals	Conferences	Journals	Conferences	Books/chapters/ monographs/manuals
33	15	-	10	-

Funded Research Projects

Ongoing Major Research Projects

S.No	Title	Funding Agency	Amount (Rs. In lakhs)	Duration Months
1	Evaluation of Battery Performance for one year as per customer specification	M/s Indus Towers	17	12
2	Performance analysis and evaluation of 12 sets of lead acid batteries as per IS 16270 Specification	M/s Exide Industries, Kolkata	58	24

3	Cyclic Endurance of 12 V/150 Ah battery as per IS 16270 Specification	M/s Beacon Power System	2	9
4	Performance evaluation & analysis of Lead acid batteries as per IEC 61427	M/s Duracell India, Bengaluru	16	24
5	Design and development of bimetallic nanomaterials for green and sustainable energy resources: Fuel cells	DST Nano Misson	25	36
6	CSIR-CECRI's Testing Platform for Energy Storage Devices	CSIR	140	12

Completed Major Research Projects

S.No.	Title	Funding Agency	Amount (Rs. In lakhs)	Duration months
1	Understanding the Potential of Graphene for Corrosion Control Applications	DST	25	36
2	Design & Development of 12 V/ 5 Ah SLI Flooded Lead-Acid Battery for On board charging.	TVS Motors Hosur	28	24
3	Development of Advanced lead acid batteries using nanomaterials and Ionic liquids	Reliance Industries, Navimumbai	17	12
4	Development of next generation lead acid batteries for commercial applications	Livguard Batteries H.P	16	12
5	Performance Evaluation and Tear down analysis of 2V/600 Ah VRLA cells used in Telecom Towers	Indus Towers New Delhi	15	12
6	Evaluation of 2 V / 80 Ah & 2 V / 200 Ah Low-maintenance Batteries as per IRS S 88/2004 Specification.	M/s Microtek Mysore.	12	24
7	BATTERY TESTING 2 V/500 Ah LMLA CELLS IN PPCP AS PER IRS :S: 88/2004	M/s Microtek Mysore.	5	24
8	Analysis of 2 V/200 and 2 V/500 Ah lead acid battery under IRS 93/96 Specification	M/s EnerSys India	10	24
9	BATTERY TESTING 2V/600 Ah VRLA CELLS AS PER IS 15549 (Two Sets)	EXIDE, Hosur	8	12

Patents

1. Template directed formation of metal nanoparticles and uses thereof.
Publication number: 20160181622
Abstract: Disclosed herein is a composition of matter comprising metal nanoparticles dispersed in a protein matrix comprising an elastic protein or homolog or fragment thereof. The metal may be an electrocatalyst metal. Also disclosed are electrodes, electrochemical half-cells and fuel cells comprising the composition of matter.
Type: Application
Filed: November 12, 2013
Publication date: June 23, 2016
Inventors: Naba K. Dutta, Namita Roy Choudhury, Sundar Mayavan, Rajkamal Balu, Jasmin Whittaker, Christopher M. Elvin, Anita J. Hill

Distinctive Achievements / Awards

1. Positioned CECRI as one of the MNRE & BIS approved nodal lab for testing batteries for Solar PV applications.
2. Positioned CECRI as one of the global leader in Lead Acid Battery Research and Development.
3. Represented CECRI at LABAT 2014 & LABAT 2017 Bulgaria (Prestigious International conference in lead acid batteries). Represented CECRI at 17th Asian Battery Conference 2017 (Malaysia) & 2019 (Indonesia).
4. Represented CECRI (from 2016) at all national level lead acid battery conference organized by India Lead Zinc Development Association (ILZDA) and Federation of Indian Small Scale Battery Associations (FISBA).
5. Represented CECRI at BIS and MNRE technical committee on Primary/Secondary batteries (ETD 10 & ETD 11).
6. Technical committee member for revising IS 16270 Specification: Secondary cells and batteries for solar photovoltaic application - general requirements and methods of test.
7. Have been able to create/add new clients to the organization.

Events organized in leading roles

Number of Seminars / Conferences / Workshops / Events organized: 10+

Events Participated

Conferences / Seminars / Workshops:

International Seminars: 20+

National Seminars: 50+

Membership in Professional Bodies

Referee for the International Journals – RSC Advances, Chem.Select, Energy Storage

MEMBER: BIS ETD 11 Technical Committee on Secondary cells and Batteries

MEMBER: BIS ETD 10 Technical Committee on Primary cells and Batteries

MEMBER: MNRE Technical Committee on Batteries for Solar PV Applications

Resource persons in various capacities

Number of Invited / Special Lectures delivered: 30+

Others

1. No. of PhD Thesis Evaluated
2. No. of PhD Public Viva Voce Examinations conducted: 2

Publications

<https://scholar.google.co.in/citations?user=k-PSw4IAAAAJ&hl=en>