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Title	Dr.	First Name	SAFIR AHMAD	Last Name	HASHMI	Photograph
Designation		Professor				
Department		Physics & Astrophysics				
Address (Campus)		Department of Physics & Astrophysics, University of Delhi, Delhi-110007				
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Web-Page						
Education						
Subject		Institution		Year	Details	
Ph.D.		Banaras Hindu University, Varanasi		1988	Thesis topic: Proton Transport in Ammonium Para Tungstate Pentahydrate and Ammonium Dihydrogen Phosphate	
M.Sc.		Allahabad University		1981	Subjects: Physics (Spl. Electronics)	
B.Sc.		Allahabad University		1979	Subjects: Physics, Chemistry Mathematics	
Career Profile						
Organisation / Institution		Designation		Duration	Role	
Banaras Hindu University		Research Associate		1991-1993	Teaching & Research	
HNB University, Garhwal		Lecturer		Sept. 1993 (one month)	Teaching & Research	
North Eastern Regional Institute of Science & Technology (NERIST), Itanagar		Lecturer / Sr. Lecturer		October 1993 – Jan. 28, 2005	Teaching & Research	
University of Delhi		Reader		Jan. 31, 2005 – Jan.30, 2008	Teaching & Research	
University of Delhi		Associate Professor		Jan. 31, 2008 – Jan.30, 2011	Teaching & Research	
University of Delhi		Professor		Jan. 31, 2011 - Continuing	Teaching & Research	
Research Interests / Specialization						
<p>Electroactive polymers for Batteries and Supercapacitors. Current interest is devoted towards the :</p> <ul style="list-style-type: none"> • Development of magnesium and sodium rechargeable batteries using gel polymer electrolytes, • Development of solid-state and flexible supercapacitors based on carbonaceous materials and conducting polymer electrodes, and gel polymer electrolytes, and • Development of thermally and electrochemically stable polymer electrolytes for their application 						

in energy storage devices.

Teaching Experience (Subjects/Courses Taught)

2005-present: Electronics (Core paper, M.Sc. (Previous))
 Electronics (Special paper-I, M.Sc.(Final))
 Electronics Experimental Lab (M.Sc. Previous)
 Electronics Experimental Lab (M.Sc. Final)
 Nuclear Physics Experimental Lab (M.Sc. Previous)
 Basic Electronics (Core paper, M.Tech, Nanoscience & Nanotechnology)
 Physics Experimental Lab. (M.Tech, Nanoscience & Nanotechnology)
 Atomic & Molecular Physics (Core paper, M.Sc. (Previous))

Honors & Awards

-Member, Expert Committee for project evaluation of Young Scientists, Physical & Mathematical Sciences, SERB (DST), New Delhi.
-Member, Expert Committee for INSPIRE Fellowship Evaluation (Physical Sciences), SERB (DST), New Delhi.
-President, Indian Solid State Ionics Society

Publications (LAST FIVE YEARS)

Books / Monographs

<u>Year of Publication</u>	<u>Title</u>	<u>Publisher</u>	<u>Co-Author</u>
2015	Electroactive Polymers: Materials & Devices, Volume-V (<i>Proceedings of "Fifth International Conference on Electroactive Polymers" held at BHU, Varanasi during November 04-09, 2012</i>)	Allied Publishers	R.K Singh, Amita Chandra and Amreesh Chandra

In Indexed/ Peer Reviewed Journals

<u>Year of Publication</u>	<u>Title</u>	<u>Journal</u>	<u>Co-Author</u>
2014	Protic ionic liquid-based gel polymer electrolyte: structural and ion transport studies and its application in proton battery	J Solid State Electrochem, 18, 2255-2266	Kuldeep Mishra, D. K. Rai
2014	Studies on a proton battery using gel polymer electrolyte	High Performance Polymers, 26, 672–676	Kuldeep Mishra, D. K. Rai
2014	A novel configuration of electrical double layer capacitor with plastic crystal based gel polymer electrolyte and graphene nano-platelets as electrodes: A high rate performance	Energy, 80, 465-473	Manoj K. Singh, Mohd. Suleman, Yogesh Kumar
2015	Flexible electric double-layer capacitors fabricated with micro-/mesoporous carbon electrodes and plastic crystal incorporated gel polymer electrolytes	J Solid State Electrochem., 19 1347–1357.	Mohd. Suleman, Yogesh Kumar
2015	Synthesis of surfactant free SnS nanorods by solvo-thermal route with better electrochemical properties towards supercapacitor application	RSC Adv. 5, 17228.	Himani Chauhan, Manoj K Singh, Sasanka, Deka
2015	Solid-state electric double layer capacitors fabricated with plastic crystal based flexible gel polymer electrolytes: Effective role of electrolyte anions	Materials Chemistry and Physics, 163 (2015)	Mohd. Suleman, Yogesh Kumar

		161-171	
2015	High-rate supercapacitive performance of GO/r-GO electrodes interfaced with plastic- crystal-based flexible gel polymer electrolyte	Electrochim. Acta, 182 (2015) 995–1007	Mohd. Suleman, Yogesh Kumar
2016	Ionic liquid based sodium ion-conducting composite gel polymer electrolytes: Effect of active and passive fillers	J. Solid State Electrochem., DOI: 10.1007/s10008-016-3284-6	Mohd. Yasir Bhat, Manoj K. Singh, N.T. Kalyana Sundaram, Bala P. C. Raghupathy, Hideaki Tanaka
2016	Surfactant assisted polyaniline nanofibres—Reduced graphene oxide (SPG) composite as electrode material for supercapacitors with high rate performance	Electrochimica Acta 222 (2016) 570–579	Deepika Jain, Amarjeet Kaur
2017	Development of SnS ₂ /RGO nanosheet composite for cost-effective aqueous hybrid supercapacitors	Nanotechnology 28 (2017) 025401 (11pp)	Himani Chauhan, Manoj K Singh, Praveen Kumar, Sasanka Deka
2017	Optimization of porous polymer electrolyte for quasi-solid-state electrical double layer supercapacitor	Electrochimica Acta 235 (2017) 570–582	Nitish Yadav, Kuldeep Mishra
2017	Performance of solid-state hybrid supercapacitor with LiFePO ₄ /AC composite cathode and Li ₄ Ti ₅ O ₁₂ as anode	Ionics DOI:10.1007/s11581-017-2027-8	Manoj K. Singh
2017	Activated graphene oxide/reduced graphene oxide electrodes and low viscous sulfonium cation based ionic liquid incorporated flexible gel polymer electrolyte for high rate supercapacitors	J. Alloys and Comps. 695 (2017) 3376-3392	Mohd. Suleman, M.A.R. Othman, S.A. Hashmi, Yogesh Kumar, Mohd. Deraman, R. Omar, M.R.M. Jasni
2018	Magnesium Ion-Conducting Gel Polymer Electrolyte Nanocomposites: Effect of Active and Passive Nanofillers	Polymer Composites, DOI 10.1002/pc.24853	Jyoti Sharma
2018	Free-standing, flexible PEDOT-PSS film and its nanocomposites with graphene nano-platelets as electrodes for quasi-solid-state supercapacitors	Nanotechnology, 29 (2018) 395401 (16 pp)	Sultan Ahmed, M. Rafat, Manoj K Singh
2018	Nanofiller Incorporated Porous Polymer Electrolyte for Electrochemical Energy Storage Devices	High Performance Polymers, 30 (2018) 957–970	Nitish Yadav, Kuldeep Mishra
2018	High performance quasi-solid-state supercapacitors with peanut-shell-derived porous carbon	J. Power Sources, 402 (2018) 133–146	Neetu Yadav, Manoj K. Singh, Nitish Yadav
2018	Faster ion switching NiCo ₂ O ₄ nanoparticle electrode based supercapacitor device with high performances and long cycling stability	ACS Applied Energy Materials, 1(12) (2018) 6999-7006	Lakshya Kumar, Himani Chauhan, Neetu Yadav, Nitish Yadav, Sashank Deka
2019	Solid-state pseudocapacitors based on MnO ₂ -nanorod-electrodes and plastic crystal incorporated gel polymer electrolyte: Synergistic effect of Li-salt addition in electrolyte and morphology of electrodes	J. Solid State Electrochem., 23 (2019) 591–606	Md. Yasir Bhat

2019	Background, fundamental understanding and progress in electrochemical capacitors	J. Solid State Electrochem., 23 (2019) 667–692	Yogesh Kumar, Sangeeta Rawal, Bhawana Joshi
2019	Pinecone-derived porous activated carbon for high performance all-solid-state electrical double layer capacitors fabricated with flexible gel polymer electrolytes	Electrochim. Acta, 304 (2019) 94-108	Md. Yasir Bhat, Nitish Yadav

Articles

Nil

Conference Presentations (Last Five Years)

- **Gel polymer electrolytes for flexible electric double layer supercapacitors: Role of electrolyte ions, Invited talk in “International Conference Science and Engineering of Materials (ICSEM-2014), held at Sharda University, Greater Noida, India during 6-8 Jan., 2014.**
- **Solid-state electric double layer supercapacitors based on plastic-crystal-incorporated lithium-ion-conducting gel polymer electrolytes, Poster Presentation in “XIV International Symposium on Polymer Electrolyte (ISPE 14)” held at Deakin University, Geelong, Australia during Aug. 24-29, 2014.**
- **Solid-State Supercapacitors based on GO/r-GO Electrodes and Plastic-Crystal-incorporated Flexible Gel Polymer Electrolytes, Invited Talk in “JAIST Japan-India Symposium on Materials Science 2015” held at JAIST, Ishikawa, Japan, Mar. 2-3, 2015.**
- **High Rate Supercapacitors with Graphene-based Electrodes and Succinonitrile-incorporated Gel Polymer Electrolytes, Invited talk in “Eleventh National Conference on Solid State Ionics (NCSSI-11)” held at Tezpur University, Assam, Dec. 21-23, 2015.**
- **Solid-State Electrical Double Layer Supercapacitors: Role of Electrolyte Ions and Porosity of Carbon Electrodes, Keynote Address “15th Asian Conference on Solid State Ionics” held on NOVEMBER 27-30, 2016 at IIT, Patna, India.**
- **Recent Development on Solid State Electrical Double Layer Capacitors with Polymer-Based Electrolytes, Invited talk in “6th International Conference on Functional Electroceramics and Polymers (ICEP-2017)” held during February 20 -22, 2017 at IIT Kharagpur-721302, India**
- **Role of Electrolytes in Electrochemical Supercapacitors, Invited talk in “12th NATIONAL CONFERENCE ON SOLID STATE IONICS, at BITS Pilani held during DECEMBER 21-23, 2017.**
- **Electrical Double Layer Supercapacitor: Issues & Recent Developments, Keynote Address in “International Meeting on Energy Storage Devices (IMESD-2018)”, December 10-12, 2018, Department of Physics, Indian Institute of Technology Roorkee, Roorkee, India**
- **Biomass-based Eco-friendly Carbon Electrodes for Flexible, Solid-state Supercapacitors, Invited Talk in “International Conference on Advanced Materials (ICAM-2019)” on 6-7 March, 2019 at Centre for Nanoscience and Nanotechnology, Jamia Millia Islamia (A Central University), New Delhi, India.**

<u>Conference/Workshop Organisation</u>				
<ul style="list-style-type: none"> • Co-Chairperson, 7th International Conference on Electroactive Polymers (ICEP-2019), February 3-8, 2019, Udaipur, India • Coordinator, Two week summer programme (revision classes) for undergraduate students of the University of Delhi, 17th to 29th June, 2019 at Department of Physics & Astrophysics, University of Delhi. 				
Total Publication Profile optional				
<u>Books</u>				
1 Edited book (In last five years)				
<u>In Indexed/ Peer Reviewed Journals</u>				
21 publications in Refereed Journals (In last five years)				
<u>Articles</u>				
Nil				
<u>Conference Presentations (In last five years)</u>				
Ten conference presentations				
Public Service / University Service / Consulting Activity				
Not Applicable				
Professional Societies Memberships				
<ol style="list-style-type: none"> 1. Indian Solid State Ionics Society 2. Indian Science Congress Association (Life Member) 3. National Academy of Science India (MNASC), Allahabad 				
Projects (Major Grants / Collaborations)				
1. Development of Electrochemical Hybrid Supercapacitors based on Conducting Polymer Electrodes and Polymer Electrolytes for Energy Storage	DST	Three years (From April, 2011 – 31 st March 2014)	Rs. 36,45,000/=	Completed
2. Development of Thermally and Electrochemically Stable Gel Polymer Electrolyte for Sodium Ion Batteries	M/S Renault Nissan Technology, Japan	One year, 2013-14	Rs. 15,60,000/=	Completed
3. Development of Flexible-Solid-State Capacitors based on Sodium Ion Conducting Gel Polymer Electrolytes	SERB (DST)	Three Years (From March 2017 to March 2020)	Rs. 57,95,002/=	Ongoing
Other Details				

Visits Abroad (In last five years):

- Padova, Italy to attend the “XII International Symposium on Polymer Electrolytes (ISPE-12), held on 29 August — 3 September 2010.
- Yamaguchi University, Ube, Japan, during June 2012 (One month) under INSA-JSPS bilateral exchange programme of scientists.
- Universiti Teknologi Mara (UITM), Shah Alam, Malaysia, 30th June to 7th July, 2013, Research visit.
- Deakin University, Geelong, Australia to attend “XIV International Symposium on Polymer Electrolyte (ISPE 14)” held on Aug. 24-29, 2014.
- JAIST, Ishikawa, Japan to attend “JAIST Japan-India Symposium on Materials Science 2015” held on Mar. 2-3, 2015.
- Department of Physics, University of Malaya, Malaysia, 05.12.2014 to 21.12.2015. Research Visit

(Signature of Faculty Member)

(Signature & Stamp of Head of
The Department)