

Dr. Bhanu Bhusan Khatua, Ph.D.

Professor, Indian Institute of Technology Kharagpur



Professor
Materials Science Centre
Indian Institute of Technology Kharagpur
Kharagpur-721302,
West Bengal,
India

Nationality: Indian
Date of birth: 7th January, 1974
E-mail: khatuabb@matsc.iitkgp.ernet.in
Alt: khatuabb@yahoo.com
Ph: (+91) 3222 283982 (O)/283983 (R)
Cell: 9932507444

Present Research Activities

1. Energy Materials (Piezoelectric, Triboelectric and hybrid nanogenerators for energy harvesting and Supercapacitors as energy storage)
2. EMI Shielding Materials (Polymeric and Hybrid composites)
3. Polymer/clay Nanocomposites, Morphology Control in Incompatible Polymer Blends using Nanoclay
4. Reactive Polymer Blends: Processing and Characterizations
5. Electrically Conducting Polymeric PTCR Composites, Polymer nanocomposites (CNT, CNH, Graphene, etc.) for electronics applications

Academic Records

PhD in Polymer Science & Engineering, 2001

Materials Science Centre, Indian Institute of Technology Kharagpur, Kharagpur, India

Thesis: (Supervisor: Prof. C. K. Das)

MSc in Chemistry, 1996, (*University Gold Medalist)

Department of Chemistry, Vidyasagar University, Midnapore, India

BSc with Honours in Chemistry, 1994, First Class

Vidyasagar University, Midnapore, West Bengal, India

Awards and Honours

- University Gold Medal Winner for standing 1st in M. Sc. (1996)
- Biswanath De Gold Medal Winner for standing 1st in M. Sc. (1996)
- Post Doctoral Research Fellowship from Technion-Israel Institute of Technology (IIT- Haifa), Israel (December-2000 ~ February-2002)
- KOSEF Post Doctoral Research Fellowship from POSTECH-Pohang University of Science & Technology, South Korea (July-2002 ~ April-2004)
- Patent Award from GE India Technology Centre, Bangalore

Previous Records

- December 2000 – February 2002: Post Doctoral Research Associate, Chemical Engineering Department, Technion – Israel Institute of Technology (IIT -Haifa), Israel.
- July 2002 – April 2004: Post Doctoral Research Associate, Polymer Research Institute, Department of Chemical Engineering, POSTECH – Pohang University of Science and Technology, South Korea.
- May 2004 – April 2007: Research Scientist, Polymer Science and Technology, JFWTC, GE India Technology Centre, Bangalore, India.
- May 2007-July 2013: Assistant Professor, Materials Science Centre, IIT Kharagpur, India.
- August 2013-Dec 2018: Associate Professor, Materials Science Centre, IIT Kharagpur, India.
- December 2018 - Present: Professor, Materials Science Centre, IIT Kharagpur, India.



Research Experience: (Since 1997)

Research Fields:

- Energy Materials (Piezoelectric, Triboelectric and hybrid nanogenerators for energy harvesting and Supercapacitors as energy storage)
- EMI Shielding Materials (Polymeric and Hybrid composites)
- Preparation of Elastomer/Elastomer and Elastomer/Plastics blends by different blending techniques
- Studies on the effect of inter-chain crosslinking reaction on properties of reactive Polymer Blends and Composites
- Polymer Processing, Polymer Blend Morphology and Characterizations
- Synthesis of polymer clay nanocomposites by Suspension polymerization, Bulk polymerization, Solution Polymerization, etc.
- Structure–Properties relations in melt-processable Polymer-clay nanocomposites
- Polymer-Carbon nanotube composites: Structure – Property analysis
- Electrically Conducting Polymer – Filler Composites: PTCR applications



Research Projects Completed/Undertaken at IIT Kharagpur

- **Project Title** : Synthesis by Suspension Polymerization and Characterization of PMMA/clay and PS/clay Nanocomposites
Principal Investigator : Bhanu Bhusan Khatua
Sponsor : SRIC, IIT Kharagpur, **Funds: 3.40** Lakhs
- **Project Title** : Development of Phase Morphology in Incompatible Polymer Blends by using Nanoclay
Principal Investigator : Bhanu Bhusan Khatua
Sponsor : DST, New Delhi , **Funds: 17.18** Lakhs
- **Project Title** : Use of Nanocomposites for Efficient Welding of Thermoplastics
Principal Investigator : Prof. C. K. Das
Co-Principal-Investigators : Bhanu Bhusan Khatua
Sponsor : DST, New Delhi, **Funds: 7.90** Lakhs
- **Project Title** : Development of Suitable Production System for Natural Rubber Coated Jute Fabrics for Novel End Uses
Principal Investigator : Prof. Basudam Adhikari
Co-Principal-Investigators : Bhanu Bhusan Khatua
Sponsor : JMDC, Kolkata, **Funds: 30.00** Lakhs
- **Project Title** : : Novel Polymeric Composite Membranes for Selective Separation of Gas Mixtures
Principal Investigator : Prof. Susanta Banerjee
Co-Principal-Investigators : Bhanu Bhusan Khatua
Sponsor : DST, New Delhi, **Funds: 55.00** Lakhs
- **Project Title**: Development of electrical conductivity and EMI shielding effectiveness in polymer/MWCNT/graphene composites at very low filler loading
Principle Investigator: Bhanu Bhusan Khatua
Sponsor: DST, New Delhi, Funds: **Rs. 5919600/**



Teaching Experience at IIT Kharagpur (Since 2007: Subjects taught / teaching)

At the undergraduate level:

1. Polymer Technology (B. Tech Course), 2017-2018

At the postgraduate (M.Tech.) level: Since 2007

1. Processing and Fabrication of Polymers (M. Tech Course)
2. Polymer Blends And Alloys (M. Tech Course)
3. Materials Laboratory (M. Tech Course)
4. Advanced Materials Laboratory (M. Tech Course)

Ph.D. Awarded (7)

SL No.	Year	Name & Current position	Thesis Title
1.	2018	Ranadip Bera (Postdoctoral Researcher, National University of Singapore, Singapore)	Polymer/Carbonaceous Nanofiller Conducting Composites for Efficient Electromagnetic Interference Shielding Through Enhanced Microwave Absorption
2.	2015	Nilesh Kumar Shrivastava (Job in TORAY Company, Malaysia)	A comprehensive approach to minimize electrical percolation threshold of In-situ polymerized polymer nanocomposites by selective dispersion of multi-wall carbon nanotube
3.	2015	Supratim Suin (Assistant Professor, Vivekananda Centenary College, Rahara, W.B., India)	Retention of optical transparence of polycarbonate in polycarbonate/clay nanocomposites: preparation and its characterizations
4.	2014	Sandip Maiti (Postdoctoral Researcher, Pohang University of Science and Technology, South Korea)	A strategy to achieve low percolation threshold with high electrical conductivity in polymer/carbon nanotube nanocomposites based on polycarbonate
5.	2011	Sumana Mallick (Assistant Professor, Techno India, Kolkata, India)	Role of nanoclay on morphology and properties of immiscible by binary polymer blends
6.	2012	Prativa Kar (Assistant Professor, Gandhi Institute of Engineering and Technology, Odisha)	Positive temperature coefficient to resistivity characteristics of polymer composites based on coefficient of thermal expansion mismatch phenomena

Ph.D. Awarded (Co-Guidance)

SL No.	Year	Name & Current position	Thesis Title
7.	2016	Ansuman Barman (CIPET Haldia), PhD Co-Guidance, Degree awarded from Jadavpur University, Kolkata	Preparation and Characterization of Composites made from Agro-based Natural fibers and Thermoplastics and Study of Their Industrial Applications

Current PhD Students

SL No.	Name	Area of Research
1.	Sumanta Kumar Karan	Piez/pyro/triboelectric materials for energy harvesting applications
2.	Amit Kumar Das	Polymer nanocomposites for supercapacitor applications
3.	Sarbaranjan Paria	Polymer nanocomposites for piezoelectric applications
4.	Anirban Maitra	Polymer nanocomposites for hybrid supercapacitor applications
5.	Lopamudra Halder	Polymer nanocomposites for supercapacitor applications
6.	Aswini Bera	Polymer nanocomposites for supercapacitor applications
7.	Suman Kumar Si	Piezoelectric energy harvesting materials
8.	Anurima De	Conducting polymer nanocomposites for EMI shielding applications
9.	Suparna Ojha	Piezoelectric energy harvesting materials
10.	Sumanta Bera	Piezoelectric energy harvesting materials

Master Student Guidance (30) Completed

MS	1	
M.Tech.	Completed	Ongoing
	29	3

Patents Filed:

1. Piezoelectric Energy Harvesting through Bio-waste Eggshell Membrane, *Sumanta Kumar Karan, Sandip Maiti, Bhanu Bhusan Khatua. Submitted for filing (Application No-21460). IIT Kharagpur, India, 2019.*
2. Spider Silk fiber based Novel Bio-Piezoelectric Energy Harvester, *Bhanu Bhusan Khatua, Sumanta Kumar Karan, Sandip Maiti, Jin Kon Kim. Filed, India, 2018 (Application No: 201831036382).*
3. Harvesting mechanical energy through bio-piezoelectric energy harvester using bio-waste onion skin, *Bhanu Bhusan Khatua, Sumanta Kumar Karan, Sandip Maiti, Jin Kon Kim. Filed, India, 2017 (Application No: 201831024973).*
4. Inherent Polymeric PTCR Composites: Article and Associated Device, *Bhanu Bhusan Khatua, Sumanda Bandyopadhyay, Soumyadeb Ghosh & N. S. Hari, US Patent, US20080006795A1.*


- Inherent Polymeric PTCR Composites: Article and Associated Method, **Bhanu Bhusan Khatua**, *Sumanda Bandyopadhyay, Soumyadeb Ghosh, N. S. Hari & F. Marcx*, *US Patent, US20080006796A1*.
- Inherent Polymeric PTCR Composites: Composition and Associated Method, **Bhanu Bhusan Khatua**, *Sumanda Bandyopadhyay, Soumyadeb Ghosh, N. S. Hari & F. Marcx*, *US Patent, US20080009572A1*.
- Inherent Polymeric PTCR Composites: Composition and Associated Method, **Bhanu Bhusan Khatua**, *Sumanda Bandyopadhyay, Soumyadeb Ghosh & N. S. Hari*, *US Patent, US20080009578A1*.
- Polymer Matrix and Filler with a Curie Temperature for a Circuit Opening Device, **Bhanu Bhusan Khatua**, *Sumanda Bandyopadhyay, Soumyadeb Ghosh, N. S. Hari & F. Marcx*, *WO2008/008573A1*.

Book chapter:

- Preparation of Core-Shell Nanocomposite by Suspension Polymerization. Dibyendu Debnath and Bhanu Bhusan Khatua. LAP LAMBERT Academic Publishing, 2014, ISBN-13: 978-3-659-53815-5, ISBN-10: 3659538159.
- Graphene, Its Analogues and Modern Science. Sandip Maiti, Sumanta Kumar Karan and Bhanu Bhusan Khatua. (Under Revision).

List of Publications in International Journals: 103 (Publication attached)
: 6 (Under Revision)

Papers Presented in International/National Conferences: 62 (List attached)

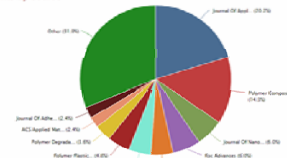


Bhanu Bhusan Khatua
Associate Professor, Indian Institute of Technology Kharagpur
Verified email at matsc.iitkgp.ernet.in
polymer nanocomposites

Cited by

YEAR	All	Open 2014
2019	2345	1823
2018	214	20
2017	62	15
2016		
2015		
2014		
2013		
2012		
2011		
2010		
2009		
2008		
2007		
2006		
2005		
2004		
2003		
2002		
2001		
2000		
1999		
1998		
1997		
1996		
1995		
1994		
1993		
1992		
1991		
1990		
1989		
1988		
1987		
1986		
1985		
1984		
1983		
1982		
1981		
1980		

Documents by source



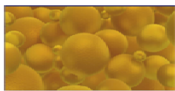
HIGHLIGHTS

- Advanced Energy Materials
Volume 6(20), Year 2016, 1601016 Pages 1–12.
o Listed as top 5 article
o Highlighted in Design for Science
- Carbohydrate Polymers
Volume 110, Year 2014, Pages 430-439
o Listed as top 10 article
- Macromolecular Chemistry and Physics
Volume 210, Year 2009, Pages 1104-1113
o Appeared as Cover Page of the journal

Highly Cited Articles

Macromolecules, 37 (7), pp. 2454-2459, 2004 (Citation: 390)
ACS Applied Materials and Interfaces, 5 (11), pp. 4712-4724, 2013 (Citation: 173)

Book Published

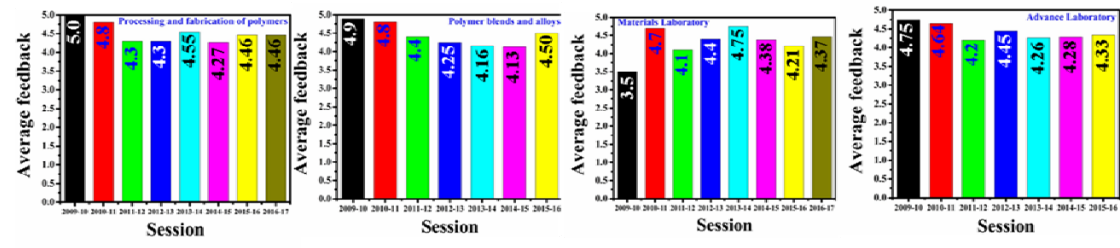


Preparation of Core-Shell Nanocomposites by Suspension Polymerization
 Bhanu Bhusan Khatua, Dibyendu Debnath
 LAP LAMBERT Academic Publishing

Facilities developed in my Lab

- Polymer Processing and molding
- Electrical property measurement
- CV measurement
- Dielectric property measurement
- Piezoelectric measurement set-up
- EMI-SE measurement
- PTCR measurement set-up

Teaching Feedback



Research Highlighted/Featured

Spider Silk based Piezoelectric Energy Harvester

1. Spider silk helps generate electricity. (*Nature Asia, 2018*) Link: <https://www.natureasia.com/en/nindia/article/10.1038/nindia.2018.117>
2. Piezoelectric nanogenerators made from spider silk. (*Nanowerk, 2018, USA*). Link: <https://www.nanowerk.com/spotlight/spotid=50432.php>
3. The magic of spun silk. (*The KGP Chronicle, 2018*). Link: <http://www.kgpchronicle.iitkgp.ac.in/the-magic-of-spun-silk/>
4. How to use spider silk to generate energy and power a pacemaker. (*The Indian Express, 2018*)
Link: <https://indianexpress.com/article/explained/iit-kharagpur-spider-silk-to-generate-energy-and-power-a-pacemaker-5243161/>

Eggshell Membrane based Piezoelectric Energy Harvester

5. Energy generators, wearable sensors from eggshell membrane. (*Nature Asia, 2018*). Link: <https://www.natureasia.com/en/nindia/article/10.1038/nindia.2018.71>
6. Eggshell membranes from bio waste could be harvesters for green energy. (*Nanowerk, 2018, USA*) Link: <https://www.nanowerk.com/spotlight/spotid=50417.php>
7. INNOVATION: IIT scientists use eggshell membrane to generate electricity. (*The Economic Times, Energy World, 2018*). Link: <https://energy.economictimes.indiatimes.com/news/power/innovation-iit-scientists-use-eggshell-membrane-to-generate-electricity/64772364>
8. Electricity from Eggshells: IIT Kharagpur Finds Novel Way to Power Wearable Gadgets! (*The Better India, 2018*). Link: <https://www.thebetterindia.com/147901/eggshells-electricity-iit-kharagpur-news/>
9. IIT scientists use eggshell membrane to generate electricity: Here's how. (*DNA, 2018*). Link: <https://www.dnaindia.com/science/report-iit-scientists-use-eggshell-membrane-to-generate-electricity-here-s-how-2629944>

Onion Skin based Piezoelectric Energy Harvester

10. Powering a piezoelectric nanogenerator with onion skin bio waste. (*Nanowerk, 2017, USA*). Link: <https://www.nanowerk.com/spotlight/spotid=48645.php>
11. Onion skin brings tears of joy. (*Nature Asia, 2017*) Link: <https://www.natureasia.com/en/nindia/article/10.1038/nindia.2017.141>
12. **Idea India Ka:** IIT Kharagpur scientists use onion skin to generate electricity. (*News Nation, 2018, India*). Link (*Video*): <http://www.newsnation.in/videos/special/idea-india-ka-iit-kharagpur-scientists-use-onion-skin-to-generate-electricity-105/38023>. YouTube link: https://www.youtube.com/watch?v=bAb9_2DpPjk
13. Now, peel onions and generate electricity! IITKgp will tell you how... (*IIT Kharagpur*). YouTube link: <https://www.youtube.com/watch?v=aTtIA2FBL7w>
14. Bio-waste onion skin as innovative nature-driven piezoelectric material with high energy conversion efficiency. Advanced Engineering, 2018. Link: <https://advanceseng.com/bio-waste-onion-skin-piezoelectric-material-high-energy-conversion-efficiency/>

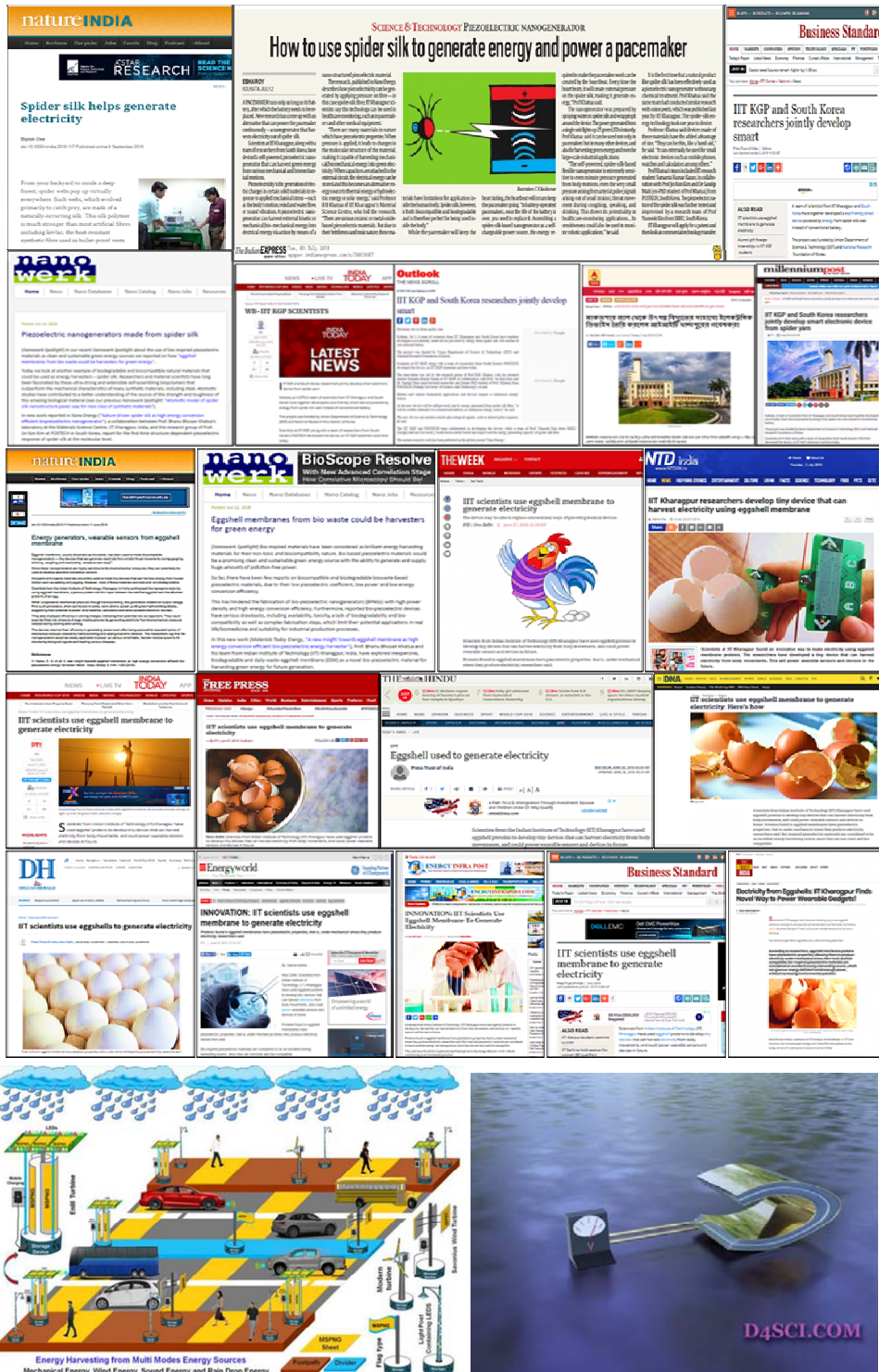
15. Indian, S. Korean team recycles onion peels into nanogenerators. ((Indo-Asian News Service (IANS), *Business Standard*, 2017)). Link: https://www.business-standard.com/article/news-ians/indian-s-korean-team-recycles-onion-peels-into-nanogenerators-117112100738_1.html
16. IIT scientists use onion skin to generate electricity. (*Press Trust of India*, 2017). Link: http://www.ptinews.com/news/9330598_IIT-scientists-use-onion-skin-to-generate-electricity.html
17. IIT-Kgp turns onion skin into electricity. (*The Times of India*, 2017). Link: <https://timesofindia.indiatimes.com/city/kolkata/iit-kgp-turns-onion-skin-into-electricity/articleshow/62102402.cms>
18. Bio-waste onion skin as innovative nature-driven piezoelectric material with high energy conversion efficiency. Link: <https://advanceseng.com/bio-waste-onion-skin-piezoelectric-material-high-energy-conversion-efficiency/>
19. IIT scientist using onion skins to generate electricity. (Bengali popular newspaper *Anandabazar Patrika*, 2018). Link: <https://www.anandabazar.com/others/science/iit-scientist-using-onion-skins-to-generate-electricity-1.734837>
20. Electricity-can-be-generated-from-onions. (*Video*) (*News 18 Bangla* and *ETV News Bangla*, 2017). Link: <https://bengali.news18.com/videos/electricity-generated-from-onions-160257.html> YouTube link: <https://www.youtube.com/watch?v=46XOIUAEKWg>

PVDF/VB₂ and PVDF/AIO-rGO based Piezoelectric Energy Harvester

21. Polymer Based Piezoelectric Nanogenerators. (*Design of Science*, 2016, Japan). Link: <https://d4sci.com/polymer-based-piezoelectric-nanogenerators/>
22. Vitamins are good for your multi-energy nanogenerators. (Nanowerk, USA 2019) Link: <https://www.nanowerk.com/spotlight/spotid=52238.php>
23. Top five most accessed papers: (Advanced Science News, 2016) Link: <https://www.advancedsciencenews.com/best-advanced-energy-materials-july/>

Screenshot of some highlighted news in various newspapers.





Research Collaboration

1. Christian-Albrechts-University zu Kiel, Germany
2. Pohang University of Science and Technology, South Korea.
3. Sungkyunkwan University, South Korea.
4. Jadavpur University, Kolkata, India.

Journal Publication Details

<i>Sl. No.</i>	<i>Name of the Journal</i>	<i>h-index</i>	<i>Impact Factor</i>	<i>No. of Publications</i>
1.	Advanced Energy Materials	129	21.875	2
2.	Nano Energy	85	13.12	4
3.	Journal of Materials Chemistry A	120	9.931	2
4.	ACS Applied Materials & Interfaces	143	8.097	3
5.	Nanoscale	152	7.233	1
6.	Carbon	229	7.082	1
7.	Chemical Engineering Journal	154	6.735	2
8.	Macromolecules	279	5.914	1
9.	Carbohydrate Polymers	156	5.158	1
10.	Electrochimica Acta	202	5.116	2
11.	Composites Part B: Engineering	98	4.92	2
12.	Materials and Design	108	4.525	1
13.	European Polymer Journal	112	3.741	1
14.	Applied Clay Science	101	3.641	1
15.	Materials Science and Engineering: A	192	3.414	1
16.	Journal of Electroanalytical Chemistry	140	3.235	1
17.	Polymer Degradation and Stability	130	3.193	3
18.	Industrial & Engineering Chemistry Research	188	3.141	4
19.	Express Polymer Letters	53	3.064	4
20.	RSC Advances	96	2.936	5
21.	Synthetic Metals	124	2.526	1
22.	Macromolecular Chemistry and Physics	100	2.492	1
23.	Polymer International	91	2.352	2
24.	Journal of Applied Electrochemistry	94	2.262	1
25.	Materials Chemistry and Physics	124	2.210	1
26.	Journal of Thermal Analysis and Calorimetry	74	2.209	1
27.	International Journal of Polymeric Materials and Polymeric Biomaterials	—	2.127	2
28.	Polymer Composites	68	1.943	12
29.	Journal of Applied Polymer Science	142	1.901	17
30.	Macromolecular Research	38	1.767	2
31.	Polymer-Plastics Technology and Engineering	42	1.655	4
32.	Polymer Engineering and Science	97	1.551	2
33.	Journal of Nanoscience and Nanotechnology	93	1.354	6
34.	Journal of Adhesion Science and Technology	57	1.039	2

35.	Journal of Macromolecular Science, Part B, Physics	41	1.005	2
36.	Journal of Elastomers and Plastics	22	0.783	2
37.	Materials Today Energy	5	_____	1
38.	ACS Applied Energy Materials	_____	_____	1
39.	ACS Applied Electronic Materials	_____	_____	1
Total Number of Publications				103

List of Publications in International Journals

(* Indicates corresponding author)

Publications: 2019

103. Nature Driven Bio-Piezoelectric/Triboelectric Nanogenerator as Next-Generation Green Energy Harvester for Smart and Pollution Free Society. (**Invited Review**)

Sandip Maiti^{†}, Sumanta Kumar Karan^{†*}, Jin Kon Kim*, Bhanu Bhusan Khatua*.* ([†] Co-first author).

Advanced Energy Materials, Volume 9, Year 2019, 1803027 Pages 1–41. (IF-21.875)

102. Designing High Energy Conversion Efficient Bio-inspired Vitamin Assisted Single-Structured based Self-Powered Piezoelectric/Wind/Acoustic Multi-Energy Harvester with Remarkable Power Density.

Sumanta Kumar Karan, Sandip Maiti, Anand Kumar Agrawal, Amit Kmar Das, Anirban Maitra, Sarbaranjan Paria, Aswini Bera, Ranadip Bera, Lopamudra Halder, Avnish Kumar Mishra, Jin Kon Kim, and Bhanu Bhusan Khatua.*

Nano Energy, Volume 59, Year 2019, Pages 169-183. (IF-13.12)

101. Triboelectric Nanogenerator Driven Self-Charging and Self-Healing Flexible Asymmetric Supercapacitor Power Cell for Direct Power Generation.

Anirban Maitra, Sarbaranjan Paria[†], Sumanta Kumar Karan[†], Ranadip Bera, Aswini Bera, Amit Kumar Das, Suman Kumar Si, Lopamudra Halder, Anurima De, Bhanu Bhusan Khatua.*

ACS Applied Materials & Interfaces, volume 9, Year 2019, Pages 5947-5958. IF-8.09.

100. A strategy to develop high efficient composite based TENG through dielectric constant, internal resistance optimization, and surface texture modification

Sarbaranjan Paria, Suman Kumar Si, Sumanta Kumar Karan, Amit Kumar Das, Anirban Maitra, Ranadip Bera, Lopamudra Halder, Aswini Bera, Anurima De, Bhanu Bhusan Khatua.*

Journal of Materials Chemistry A, Volume 7, Year 2019, Pages 3979-3991. IF-9.93.

99. Fabrication of an Advanced Asymmetric Supercapacitor based on Three-Dimensional Copper-Nickel-Cerium-Cobalt Quaternary Oxide and GNP for Energy Storage Application

Lopamudra Halder, Anirban Maitra, Amit Kumar Das, Ranadip Bera, Sumanta Kumar Karan, Sarbaranjan Paria, Aswini Bera, Suman Kumar Si, Bhanu Bhusan Khatua.

ACS Applied Electronic Materials, 2019, Volume 1, Year 2019, Pages 189–197. IF- Pending

98. PVC bead assisted selective dispersion of MWCNT for designing efficient electromagnetic interference shielding PVC/MWCNT nanocomposite with very low percolation threshold

S. Maiti, R. Bera, S. K. Karan, S. Paria, A. De, B. B. Khatua*

Composites Part B: Engineering, Volume 167, Year 2019, Pages 377-386 (IF-4.92).

Publications: 2018

97. Nature driven spider silk as high energy conversion efficient bio-piezoelectric nanogenerator.

Sumanta Kumar Karan[†], Sandip Maiti[†], Owoong Kwon, Sarbaranjan Paria, Anirban Maitra, Suman Kumar Si, Owoong Kwon, Jin Kon Kim, Bhanu Bhusan Khatua*. ([†] Co-first author).*

Nano Energy, Volume 49, Year 2018, Pages 655–666. (IF-13.12)

Highlighted worldwide in various scientific/nonscientific newspaper like Nature Asia, Nanowerk, The Indian Express, Business Standard, PTI, IITKGP official website etc. (>100 news sites) and news media (TV channel) such as, Rajya Sabha TV (operated by Rajya Sabha, Govt. of India).

96. High performance advanced asymmetric supercapacitor based on ultrathin and mesoporous MnCo₂O_{4.5}-NiCo₂O₄ hybrid and iron oxide decorated reduced graphene oxide electrode materials.

Lopamudra Halder, Anirban Maitra, Amit Kumar Das, Ranadip Bera, Sumanta Kumar Karan, Sarbaranjan Paria, Aswini Bera, Suman Kumar Si, Bhanu Bhusan Khatua.*

Electrochimica Acta, Volume 283, Year 2018, Pages 438-447. (IF-5.116)

95. Insight into Cigarette Wrapper and Electroactive Polymer Based Efficient TENG as Biomechanical Energy Harvester for Smart Electronic Applications

Sarbaranjan Paria, Ranadip Bera, Sumanta Kumar Karan, Anirban Maitra, Amit Kumar Das, Suman Kumar Si, Lopamudra Halder, Aswini Bera, Bhanu Bhusan Khatua.*

ACS Applied Energy Materials, Year 2018, Volume 1, Pages 4963-4975. (IF- Pending)

94. A new insight towards eggshell membrane as high energy conversion efficient bio-piezoelectric energy harvester.

Sumanta Kumar Karan, Sandip Maiti, Sarbaranjan Paria, Anirban Maitra, Suman Kumar Si, Jin Kon Kim, Bhanu Bhusan Khatua.*

Materials Today Energy, Volume 9, Year 2018, Pages 114-125. (Under the flagship of "Materials Today" which has IF: 21.69). (IF- Pending)

Highlighted worldwide in various scientific/nonscientific newspaper like Nature Asia, Nanowerk, The Indian Express, Business Standard, PTI, IITKGP official website etc.

93. A strategy to develop an efficient piezoelectric nanogenerator through ZTO assisted γ -phase nucleation of PVDF in ZTO/PVDF nanocomposite for harvesting bio-mechanical energy and energy storage application.

*Suman Kumar Si, Sumanta Kumar Karan, Sarbaranjan Paria, Anirban Maitra, Amit Kumar Das, Ranadip Bera, Aswini Bera, Lopamudra Halder, Bhanu Bhusan Khatua**

Materials Chemistry and Physics, Volume 213, Year 2018, Pages 525-537. (IF-2.210)

92. Temperature dependent substrate-free facile synthesis for hierarchical sunflower-like nickel–copper carbonate hydroxide with superior electrochemical performance for solid state asymmetric supercapacitor.

*Aswini Bera, Amit Kumar Das, Anirban Maitra, Ranadip Bera, Sumanta Kumar Karan, Sarbaranjan Paria, Lopamudra Halder, Suman Kumar Si, Bhanu Bhusan Khatua**

Chemical Engineering Journal, Volume 343, Year 2018, Pages 44–53. (IF-6.735)

91. An Approach to Widen the Electromagnetic Shielding Efficiency in PDMS/Ferrous Ferric Oxide Decorated RGO–SWCNH Composite through Pressure Induced Tunability.

*Ranadip Bera, Anirban Maitra, Sarbaranjan Paria, Sumanta Kumar Karan, Amit Kumar Das, Aswini Bera, Suman Kumar Si, Lopamudra Halder, Anurima De, Bhanu Bhusan Khatua**

Chemical Engineering Journal, Volume 335, Year 2018, Pages 501–509. (IF-6.735)

Publications: 2017

90. Bio-waste onion skin as an innovative nature-driven piezoelectric material with high energy conversion efficiency.

Sandip Maiti[†], Sumanta Kumar Karan[†], Juhyun Lee, Avnish Kumar Mishra, Bhanu Bhusan Khatua, Jin Kon Kim*. ([†] Co-first author)*

Nano Energy, Volume 42, Year 2017, Pages 282–293. (IF-13.12)

Highlighted worldwide in various scientific/nonscientific newspaper like, Nature Asia, Nanowerk, Business Standard, Indo-Asian News Service (IANS), PTI, Times of India, Korean news, etc. (>100 news sites) and different news medias (TV channel etc.) like, DD National (flagship channel of Doordarshan, Govt. of India), News Nation,, ETV News, ABP news and IITKGP official website etc.

89. Fast Charging Self-powered Wearable and Flexible Asymmetric Supercapacitor Power Cell with Fish Swim Bladder as an Efficient Natural Bio-piezoelectric Separator.

Anirban Maitra, Sumanta Kumar Karan, Sarbaranjan Paria, Amit Kumar Das, Ranadip Bera, Lopamudra Halder, Suman Kumar Si, Aswini Bera, Bhanu Bhusan Khatua.

Nano Energy, Volume 40, Year 2017, Pages 633–645. (IF-13.12)

88. Fabrication of an advanced asymmetric supercapacitor based on a microcubical PB@MnO₂ hybrid and PANI/GNP composite with excellent electrochemical behavior.

*Amit Kumar Das, Ranadip Bera, Anirban Maitra, Sumanta Kumar Karan, Sarbaranjan Paria, Lopamudra Halder, Suman Kumar Si, Aswini Bera, Bhanu Bhusan Khatua**

Journal of Materials Chemistry A, Volume 5(42), Year 2017, Pages 22242–22254. (IF- 9.931)

87. Salt leached viable porous Fe₃O₄ decorated polyaniline–SWCNH/PVDF composite spectacles as an admirable electromagnetic shielding efficiency in extended Ku-band region.

*Ranadip Bera, Amit Kumar Das, Anirban Maitra, Sarbaranjan Paria, Sumanta Kumar Karan, Bhanu Bhusan Khatua**

Composites Part B: Engineering, Volume 129, Year 2017, Pages 210–220. (IF-4.92)

86. NaCl leached sustainable porous flexible Fe₃O₄ decorated RGO-polyaniline/PVDF composite for durable application against electromagnetic pollution.

*Ranadip Bera, Sarbaranjan Paria, Sumanta Kumar Karan, Amit Kumar Das, Anirban Maitra, Bhanu Bhusan Khatua**

Express Polymer Letters, Volume 11(5), Year 2017, Pages 419–433. (IF-3.064)

85. Polyaniline/ α -Ni(OH)₂/iron oxide-doped reduced graphene oxide-based hybrid electrode material .

*Amit Kumar Das, Anirban Maitra, Sumanta Kumar Karan, Ranadip Bera, Sarbaranjan Paria, Bhanu Bhusan Khatua**

Journal of Applied Electrochemistry, Volume 47(4), Year 2017, Pages 531–546. (IF- 2.262)

84. A Mesoporous High Performance Supercapacitor Electrode Based on Polypyrrole Wrapped Iron Oxide Decorated Nanostructured Cobalt Vanadium Oxide Hydrate with Enhanced Electrochemical Capacitance.

*Anirban Maitra, Amit Kumar Das, Sumanta Kumar Karan, Sarbaranjan Paria, Ranadip Bera, Bhanu Bhusan Khatua**

Industrial & Engineering Chemistry Research, Volume 56(9), Year 2017, Pages 2444–2457. (IF-3.141)

83. An Approach To Fabricate PDMS Encapsulated All-Solid-State Advanced Asymmetric Supercapacitor Device with Vertically Aligned Hierarchical Zn–Fe–Co Ternary Oxide Nanowire and Nitrogen Doped Graphene Nanosheet for High Power Device Applications

*Anirban Maitra, Amit Kumar Das, Ranadip Bera, Sumanta Kumar Karan, Sarbaranjan Paria, Suman Kumar Si, Bhanu Bhusan Khatua**

ACS Applied Materials & Interfaces, Volume 9(7), Year 2017, Pages 5947-5958. (IF-8.097)

Publications: 2016

82. A Facile Approach To Develop a Highly Stretchable PVC/ZnSnO₃ Piezoelectric Nanogenerator with High Output Power Generation for Powering Portable Electronic Devices.

*Sarbaranjan Paria, Sumanta Kumar Karan, Ranadip Bera, Amit Kumar Das, Anirban Maitra, Bhanu Bhusan Khatua**

Industrial & Engineering Chemistry Research, Volume 55(40), Year 2016, Pages 10671–10680. (IF-3.141)

81. An Approach to Design Highly Durable Piezoelectric Nanogenerator Based on Self-Poled PVDF/AlO-rGO Flexible Nanocomposite with High Power Density and Energy Conversion Efficiency.

*Sumanta Kumar Karan, Ranadip Bera, Sarbaranjan Paria, Amit Kumar Das, Sandip Maiti, Anirban Maitra, and Bhanu Bhusan Khatua**

Advanced Energy Materials, Volume 6(20), Year 2016, 1601016 Pages 1–12. (IF-21.875)

Selected as most access article (top five) in Advanced Energy Materials in July, 2016. Highlighted in Design for Science (D4SCI) which is a scientific platform for highlighting innovative and inspiring designs for state-of-art high-impact research.

80. Effect of γ -PVDF on enhanced thermal conductivity and dielectric property of Fe-rGO incorporated PVDF based flexible nanocomposite film for efficient thermal management and energy storage applications.

*Sumanta Kumar Karan, Amit Kumar Das, Ranadip Bera, Sarbaranjan Paria, Anirban Maitra, Nilesh Kumar Shrivastava and Bhanu Bhusan Khatua**

RSC Advances, Volume 6(44), Year 2016, Pages 37773-37783. (IF-2.936)

Publications: 2015

79. Single wall carbon nanohorn (SWCNH)/graphene nanoplate/poly(methyl methacrylate) nanocomposites: A promising material for electromagnetic interference shielding applications.

*R. Bera, S.K. Karan, A.K. Das, S. Paria, B. B. Khatua**

RSC Advances, Volume 5 (86), Year 2015, Pages 70482-70493. (IF-2.936)

78. High performance electrode material prepared through in-situ polymerization of aniline in the presence of zinc acetate and graphene nanoplatelets for supercapacitor application.

*A. K. Das, S. Maiti, B. B. Khatua**

Journal of Electroanalytical Chemistry, Volume 739, Year 2015, Pages 10-19. (IF- 3.235)

77. Graphene nanoplate and multiwall carbon nanotube-embedded polycarbonate hybrid composites: High electromagnetic interference shielding with low percolation threshold.

*S. Maiti, B. B Khatua**

Polymer Composites, Volume 37(7), Year 2015, Pages 2058-2069. (IF-1.943)

76. Effect of Filler Content on the Properties of Polypropylene/Saccharum spontaneum Green Composite.

A. Barman, N. K. Shrivastava, B. B. Khatua, B. C. Ray**

Polymer-Plastics Technology and Engineering, Volume 54(12), Year 2015, Pages 1231-1240. (IF-1.655)

75. Self-powered flexible Fe-doped RGO/PVDF nanocomposite: An excellent material for a piezoelectric energy harvester.

*S. K. Karan, D. Mandal, B. B. Khatua**

Nanoscale, Volume 7(24), Year 2015, Pages 10655-10666. (IF-7.233)

74. Reduction of percolation threshold of multiwall carbon nanotube (MWCNT) in polystyrene (PS)/low-density polyethylene (LDPE)/MWCNT nanocomposites: An eco-friendly approach.

*R. Patra, S. Suin, D. Mandal, B. B. Khatua**

Polymer Composites, Volume 36(9), Year 2015, Pages 1574-1583. (IF-1.943)

73. Carbon nanohorn and graphene nanoplate based polystyrene nanocomposites for superior electromagnetic interference shielding applications.

*R. Bera, S. Suin, S. Maiti, N. K. Shrivastava, B. B. Khatua**

Journal of Applied Polymer Science, Volume 132(46), Year 2015, Pages 1-14. (IF-1.901)

72. Carbon nanohorn-graphene nanoplate hybrid: An excellent electrode material for supercapacitor application.

*S. Maiti, A. K Das, S. K Karan and B. B Khatua**

Journal of Applied Polymer Science, Volume 132 (25), Year 2015, Pages 1-6. (IF-1.901)

71. High electromagnetic interference shielding with high electrical conductivity through selective dispersion of multiwall carbon nanotube in poly (ϵ -caprolactone)/MWCNT composites.

*R. Bera, S. Maiti, and B. B. Khatua**

Journal of Applied Polymer Science, Volume 132(26), Year 2015, Pages 1-10. (IF-1.901)

70. Expanded Graphite (EG) as a Potential Filler in the Reduction of Percolation Threshold of Multiwall Carbon Nanotubes (MWCNT) in Poly(methyl methacrylate)/High Density Polyethylene/EG/MWCNT Nanocomposites.

*A. Raulo, S. Suin, S. Paria and B. B. Khatua**

Polymer Composites, Volume 37(7), Year 2015, Pages 2070-2082. (IF-1.943)

69. High energy density ternary composite electrode material based on polyaniline (PANI), molybdenum trioxide (MoO_3) and graphene nanoplatelets (GNP) prepared by sono-chemical method and their synergistic contributions in superior supercapacitive performance.

*A. K. Das, S. K. Karan, B. B. Khatua**

Electrochimica Acta, Volume 180, Year 2015, Pages 1-15. (IF-5.116)

Publications: 2014

68. Highly exfoliated eco-friendly thermoplastic starch (TPS)/poly (lactic acid) (PLA)/clay nanocomposites using unmodified nanoclay.

*Ayana, B., S. Suin, B. B. Khatua**

Carbohydrate Polymers, Volume 110, Year 2014, Pages 430-439. (IF-5.158)

67. Optically transparent polycarbonate/clay nanocomposites with improved performance using phosphonium modified organoclay: Preparation and characterizations.

*S. Suin, N. K. Shrivastava, S. Maiti and B. B. Khatua**

Polymer Composites, Volume 37(1), Year 2014, Pages 199-212. (IF-1.943)

66. An approach to reduce the percolation threshold of MWCNT in ABS/MWCNT nanocomposites through selective distribution of CNT in ABS matrix.

*N. K. Shrivastava, S. Suin, S. Maiti, B. B. Khatua**

RSC Advances, Volume 4(47), Year 2014, Pages 24584-24593. (IF-2.936)

65. Polyaniline integrated carbon nanohorn: A superior electrode materials for advanced energy storage.

*S. Maiti, B. B. Khatua**

Express Polymer Letters, Volume 8(12), Year 2014, Pages 895-907. (IF- 3.064)

64. Facile preparation of highly exfoliated and optically transparent polycarbonate (PC)/clay mineral nanocomposites using phosphonium modified organoclay mineral.

*S. Suin, N. K Shrivastava, S. Maiti, B. B Khatua**

Applied Clay Science, Volume 95, Year 2014, Pages 182-190. (IF-3.641)

63. Green Composites Based on High Density Polyethylene and Saccharum Spontaneum: Effect of Filler Content on Morphology, Thermal and Mechanical Properties.

A. Barman, N. K. Shrivastava, B. B. Khatua, and B. C. Ray**

Polymer Composites, Volume 36(12), Year 2014, Pages 2157-2166. (IF-1.943)

62. A strategy to achieve high electromagnetic interference shielding and ultralow percolation in multiwall carbon nanotube-polycarbonate composites through selective localization of carbon nanotubes.

*S. Maiti, S. Suin, N. K. Shrivastava and B. B. Khatua**

RSC Advances, Volume 4(16), Year 2014, Pages 7979-7990. (IF-2.936)

61. Effect of nanoclay on the morphology and properties of acrylonitrile butadiene styrene toughened polyoxymethylene (POM)/clay nanocomposites.

*A. K. Das, S. Suin, N. K. Shrivastava, S. Maiti, J. K. Mishra and B. B. Khatua**

Polymer Composites, Volume 35(2), Year 2014, Pages 273-282. (IF-1.943)

60. Mechanically improved and optically transparent polycarbonate/clay nanocomposites using phosphonium modified organoclays.

*S. Suin, S. Maiti, N. K. Shrivastava and B. B. Khatua**

Materials and Design, Volume 54, Year 2014, Pages 553-563. (IF- 4.525)

59. Influence of selective dispersion of MWCNT on electrical percolation of in-situ polymerized high-impact polystyrene/MWCNT nanocomposites.

*N. K. Shrivastava, S. Maiti, S. Suin, and B. B. Khatua**

Express Polymer Letters, Volume 8(1), Year 2014, Pages 15-29. (IF-3.064)

58. Sequential mixing as effective method in the reduction of percolation threshold of multiwall carbon nanotube in poly(methyl methacrylate)/high-density poly(ethylene)/MWCNT nanocomposites.

*Rajat Patra, Supratim Suin, Dipankar Mandal and B. B. Khatua**

Journal of Applied Polymer Science, Volume 131(10), Year 2014, Pages 1-12. (IF-1.901)

Publications: 2013

57. Transparent and Thermally Conductive Polycarbonate (PC)/Alumina (Al₂O₃) Nanocomposites: Preparation and Characterizations.

*T. Patel, S. Suin, D. Bhattacharya and B. B. Khatua**

Polymer-Plastics Technology and Engineering, Volume 52(15), Year 2013, Pages 1557-1565. (IF-1.655)

56. Low percolation threshold in polycarbonate/multiwalled carbon nanotubes nanocomposites through melt blending with poly (butylene terephthalate).

*S. Maiti, S. Suin, N. K. Shrivastava and B. B. Khatua**

Journal of Applied Polymer Science, Volume 130(1), Year 2013, Pages 543-553. (IF-1.901)

55. Electrochemical and electrical performances of cobalt chloride (CoCl₂) doped polyaniline (PANI)/graphene nanoplate (GNP) composite.

*S. Maiti and B. B. Khatua**

RSC Advances, Volume 3(31), Year 2013, Pages 12874-12885. (IF-2.936)

54. Polystyrene/MWCNT/graphite nanoplate nanocomposites: Efficient electromagnetic interference shielding material through graphite nanoplate-MWCNT-graphite nanoplate networking.

*S. Maiti, N. K. Shrivastava, S. Suin and B. B. Khatua**

ACS Applied Materials and Interfaces, Volume 5(11), Year 2013, Pages 4712-4724. (IF-8.097)

53. A strategy for achieving low percolation and high electrical conductivity in melt-blended polycarbonate (PC)/multiwall carbon nanotube (MWCNT) nanocomposites: Electrical and thermo-mechanical properties.

*S. Maiti, N. K. Shrivastava, S. Suin, B. B. Khatua**

Express Polymer Letters, Volume 7(6), Year 2013, Pages 505-518. (IF-3.064)

52. Low Percolation Threshold in Melt-Blended PC/MWCNT Nanocomposites in the Presence of Styrene Acrylonitrile (SAN) Copolymer: Preparation and Characterizations. *Sandip Maiti, Nilesh Shrivastava, Supratim Suin and B. B. Khatua**

Synthetic Metals, Volume 165, Year 2013, Pages 40-50. (IF-2.526)

51. Ultralow Electrical Percolation Threshold in Poly(styrene-co-acrylonitrile)/Carbon Nanotube Nanocomposites.

*Nilesh Shrivastava, Supratim Suin, Sandip Maiti, Bhanu B Khatua**

Industrial & Engineering Chemistry Research, Volume 52(8), Year 2013, Pages 2858-2868 (IF-3.141)

50. Reduction of percolation threshold through double percolation in melt-blended polycarbonate/acrylonitrile butadiene styrene/multiwall carbon nanotubes elastomer nanocomposites.

*Sandip Maiti, Nilesh K. Shrivastava, B. B. Khatua**

Polymer Composites, Volume 34(4), Year 2013, Pages 570-579. (IF-1.943)

49. Phosphonium Modified Organoclay as Potential Nanofiller for the Development of Exfoliated and optically Transparent Polycarbonate/Clay Nanocomposites: Preparation and Characterizations.

*Supratim Suin, Nilesh K Shrivastava, Sandip Maiti and B. B. Khatua**

European Polymer Journal, Volume 49(1), Year 2013, Pages 49-60. (IF-3.741)

48. Low Percolation Threshold and High Electrical Conductivity in Melt-Blended Polycarbonate (PC)/Multiwall Carbon Nanotube (MWCNT) Nanocomposites in the Presence of Poly(caprolactone) (PCL).

*Sandip Maiti, Supratim Suin, Nilesh K. Shrivastava, B. B. Khatua**

Polymer Engineering and Science, Volume 54(3), Year 2013, Pages 646-659. (IF-1.551)

47. Development of Electrical Conductivity in PP/HDPE/MWCNT Nanocomposite by Melt Mixing at Very Low Loading of MWCNT.

*Narendra A. Bhagat, Nilesh K. Shrivastava, Supratim Suin, Sandip Maiti, Bhanu B. Khatua**

Polymer Composites, Volume 34(5), Year 2013, Pages 787-798. (IF-1.943)

Publications: 2012

46. Exfoliated and Optically Transparent Polycarbonate/Clay Nanocomposites Using Phosphonium Modified Organoclay: Preparation and Characterizations.

*Supratim Suin and B. B. Khatua**

Industrial & Engineering Chemistry Research, Volume 51(46), Year 2012, Pages 15096-15108. (IF- 3.141)

45. Compatibilization Mechanism of Nanoclay in Immiscible PS/PMMA Blend Using Unmodified Nanoclay.

*Rajesh Iyer, Supratim Suin, Nilesh K Shrivastava, Sandip Maiti and B. B. Khatua**

Polymer-Plastics Technology and Engineering, Volume 52(5), Year 2012, Pages 514-524 (2012). (IF- 1.655)

44. A facile route to develop electrical conductivity with minimum possible multi-wall carbon nanotube (MWCNT) loading in poly (methyl methacrylate)/MWCNT nanocomposites.

*Nilesh K Shrivastava, Prativa Kar, Sandip Maiti and B. B. Khatua**

Polymer International, Volume 61(11), Year 2012, Pages 1683-1692. (IF-2.352)

43. Positive Temperature Coefficient to Resistivity Characteristics of Polystyrene/Nickel Powder/Multiwall Carbon Nanotube Composites.

*Prativa Kar, Sandip Maiti, Nilesh K Shrivastava, Saptarshi Dhibar and B. B. Khatua**

Polymer Composites, Volume 33(11), Year 2012, Pages 1977-1986 (2012). (IF-1.943)

42. PTCR Characteristics of Poly(styrene-co-acrylonitrile) Copolymer (SAN)/Stainless Steel (SS) Powder Composites.

*Prativa Kar, Nilesh K. Shrivastava, Sumana Mallick and B. B. Khatua**

Journal of Applied Polymer Science, Volume 124(1), Year 2012, Pages 607-615. (IF-1.901)

41. Electrical and Mechanical Properties of ABS/MWCNT Nanocomposites Prepared by Melt-Blending.

*Brajesh K. Singh, Prativa Kar, Nilesh K. Shrivastava and B. B. Khatua**

Journal of Applied Polymer Science, Volume 124 (4), Year 2012, Pages 3165-3174. (IF-1.901)

40. Preparation of Highly Exfoliated and Transparent Polycarbonate/Clay Nanocomposites by Melt Blending of Polycarbonate and Poly(methyl methacrylate)/Clay Nanocomposites.

*Saptarshi Dhibar, Prativa Kar, B. B. Khatua**

Journal of Applied Polymer Science, Volume 125(S125), Year 2012, Pages E601–E609. (IF-1.901)

39. Effect of Nanoclay on Positive Temperature Coefficient to Resistivity Characteristics of High Density Polyethylene/Silver-Coated Glass Bead Composites.

*M. V. Sridhar, Prativa Kar, N. Shrivastava, B. B. Khatua**

Polymer Composites, Volume 33(5), Year 2012, Pages 819-828. (IF-1.943)

38. Morphology and Properties of Nylon 6 and High Density Polyethylene (HDPE) Blends in Presence of Nanoclay and PE-g-MA.

*Sumana Mallick, Prativa Kar and B. B. Khatua**

Journal of Applied Polymer Science, Volume 123(3), Year 2012, Pages 1801-1811. (IF-1.901)

Publications: 2011

37. Properties of Polycarbonate (PC)/Multi-Wall Carbon Nanotube (MWCNT) Nanocomposites Prepared by Melt Blending.

*Sandip Maiti and B. B. Khatua**

Journal of Nanoscience and Nanotechnology, Volume 11(10), Year 2011, Pages 8613-8620. (IF-1.354)

36. Development of electrical conductivity with minimum possible percolation threshold in multi-wall carbon nanotube/polystyrene composites.

*Nilesh K. Shrivastava and B. B. Khatua**

Carbon, Volume 49(13), Year 2011, Pages 4571- 4579. (IF-7.082)

35. PTCR Characteristics of Polycarbonate/Nickel-coated Graphite-based Conducting Polymeric Composites in Presence of Poly(caprolactone).

*Prativa Kar and B. B. Khatua**

Polymer Composites, Volume 32 (5), Year 2011, Pages 747-755. (IF-1.943)

34. Effect of Nanoclay and SEBS-g-MA on the Morphology and Properties of Immiscible PMMA/PS Blend.

*Sumana Mallick and B. B. Khatua**

Journal of Nanoscience and Nanotechnology, Volume 11(2), Year 2011, Pages 979-986. (IF-1.354)

33. Co-Continuous Phase Morphology of Asymmetric Compositions of Polypropylene/High-density Polyethylene Blend by the addition of Clay.

*Anup K. Dhibar, Jin Kon Kim, Bhanu B. Khatua**

Journal of Applied Polymer Science, Volume 119, Year 2011, Pages 3080–3092. (IF-1.901)

32. Morphology and properties of nylon6 and high density polyethylene blends in absence and presence of nanoclay.

*Sumana Mallick and B. B. Khatua**

Journal of Applied Polymer Science, Volume 121(1), Year 2011, Pages 359-368. (IF-1.901)

31. Highly Reversible and Repeatable PTCR Characteristics of PMMA/Ag-coated Glass Bead Composites Based on CTE Mismatch Phenomena.

*Prativa Kar, B. B. Khatua**

Polymer Engineering and Science, Volume 51(9), Year 2011, Pages 1780-1790. (IF-1.551)

30. Effect of Nanoclay on the Morphology and Properties of Nylon6 and Poly(methyl methacrylate) (PMMA) Blends.

*Sumana Mallick and B. B. Khatua**

Journal of Macromolecular Science, Part B: Physics, Volume 50(9), Year 2011, Pages 1791-1809. (IF-1.005)

29. Synthesis of Highly Exfoliated PS/Na⁺-MMT Nanocomposites by Suspension Polymerization Using Na⁺-MMT Clay Platelets as Suspension Stabilizer.

*Sunanda Sain and B. B. Khatua**

Macromolecular Research, Volume 19(1), Year 2011, Pages 44-52. (IF-1.767)

28. Preparation by Suspension Polymerization and Characterization of Polystyrene (PS)-Poly(methyl methacrylate), PMMA, Core-Shell Nanocomposites.

*Dibyendu Debnath and B. B. Khatua**

Macromolecular Research, Volume 19(6), Year 2011, Pages 519-527. (IF-1.767)

Publications: 2010

27. Thermal and Rheological Properties of Biodegradable Poly[(butylene succinate)-co-adipate] Nanocomposites.

Jayita Bandyopadhyay, Arjun Maity, Bhanu Bhusan Khatua, and Suprakas Sinha Ray.*

Journal of Nanoscience and Nanotechnology, Volume 10 (7), Year 2010, Pages 4184-4195. (IF-1.354)

26. Effect of Coefficient of Thermal Expansion (CTE) on Positive Temperature Coefficient of Resistivity (PTCR) Behavior of HDPE-Cu Composites.

*Prativa Kar and B. B. Khatua**

Journal of Applied Polymer Science, Volume 118 (2), Year 2010, Pages 950–959. (IF-1.901)

25. Studies on the Morphology and Properties of PMMA Organoclay Nanocomposites with Reference to the Manufacturing Techniques.

*Dibyendu Debnath, Anup K. Dhibar, and B. B. Khatua**

Polymer-Plastics Technology and Engineering, Volume 49, Year 2010, Pages 1087–1094. (IF-1.655)

24. Effect of nanoclay on the morphology and properties of poly(methyl methacrylate)/high-density polyethylene blends.

*Sumana Mallick, A. K. Dhibar and B. B. Khatua**

Journal of Applied Polymer Science, Volume 116(2), Year 2010, Pages 1010-1020. (IF-1.901)

Publications: 2009

23. Effect of clay platelet dispersion as affected by the manufacturing techniques on thermal and mechanical properties of PMMA-clay nanocomposites.

A. K. Dhibar, S. Mallick, T. Rath and B. B. Khatua*

Journal of Applied Polymer Science, Volume 113 (5), Year 2009, Pages 3012-3018. (IF-1.901)

22. Preparation and characterization of Poly(methyl methacrylate)/multi-walled carbon nanotube composites.

S. Kumar, T. Rath, B. B. Khatua*, A. K. Dhibar and C. K. Das*

Journal of Nanoscience and Nanotechnology, Volume 9(8), Year 2009, Pages 4644-4655. (IF-1.354)

21. Use of pristine clay platelets as a suspension stabilizer for the synthesis of poly(methyl methacrylate)/clay nanocomposites.

S. Khatana, A. K. Dhibar, S. Sinha Ray and B. B. Khatua*

Macromolecular Chemistry and Physics, Volume 210, Year 2009, Pages 1104-1113. (IF-2.210)

20. Multi-walled carbon nanotube/polymer composites in the absence and presence of acrylic elastomer (ACM).

S. Kumar, T. Rath, R. N. Mahaling, B. B. Khatua* and C. K. Das*

Journal of Nanoscience and Nanotechnology, Volume 9(5), Year 2009, Pages 2981–2990. (IF-1.354)

19. Synergistic Effect of Nanoclay and EPR-g-MA on the Properties of Nylon6/EPR Blends. S. Mallick, T. Das, C. K. Das and B. B. Khatua*

Journal of Nanoscience and Nanotechnology, Volume 9(5), Year 2009, Pages 3099–3105. (IF-1.354)

Some Earlier Publications

18. Mechanical, morphological and thermal properties of in situ ternary composites based on poly(ether imide), silicone rubber and liquid crystalline polymer.

T. Rath, S. Kumar, R.N. Mahaling, B. B. Khatua, C. K. Das* and S. B. Yadaw.

Materials Science and Engineering: A, Volume 490(1-2), Year 2008, Pages 198-207. (IF-3.414)

17. Studies on Nylon6/EVOH/Clay ternary Composites.

N. Artzi, B. B. Khatua, M. Narkis* and A. Siegmann.

Polymer Composites, Volume 27(1), Year 2006, Pages 15-23. (IF- 1.943)

16. Effect of clay Platelets on Morphologies of Nylon 6 and Poly (ethylene-ran-propylene) Rubber Blends.

B. B. Khatua, Dong Jun Lee, H. Y. Kim and Jin Kon Kim*

Macromolecules, Volume 37, Year 2004, Pages 2454-2459. (IF- 5.914)

15. Physical and Chemical Interactions in Melt-Mixed Nylon-6/EVOH Blends.

N. Artzi, B. B. Khatua, R. Tchoudakova, M. Narkis*, A. Berner, A. Siegmann and J. M. Lagaron.

Journal of Macromolecular Science, Part B: Physics, Volume 43(3), Year 2004, Pages 605-624. (IF-1.005)

14. Aging behavior of oxygen plasma treated polypropylene with different crystallinity.

*Y. I. Yun, K. S. Kim, S. J. Uhm, B. B. Khatua, K. W. Cho, J. K. Kim and C. E. Park**

Journal of Adhesion Science and Technology, Volume 18(11), Year 2004, Pages 1279-1291. (IF-1.039)

13. Investigation of surface molecular orientation of poly(dimethylsiloxane-co-diphenylsiloxane)-modified poly(amic acid) films using dynamic contact angle measurements.

J. H. Kang, K. Cho, J. K. Kim, C. E. Park, S. J. Uhm and B. B. Khatua*

Journal of Adhesion Science and Technology, Volume 18(15-16), Year 2004, Pages 1815-18. (IF-1.039)

12. Interchain Crosslinkable Polymer Blends of Polyurethane and Polyacrylic Elastomer (Sulfur Cure).

*B. B. Khatua and C. K. Das**

Journal of Applied Polymer Science, Volume 93, Year 2004, Page 845-853. (IF-1.901)

11. Thermally Crosslinked Polymer Blends of Polyurethane and Chlorobutyl Elastomer (Sulfur Cure).

*B. B. Khatua and C. K. Das**

Polymer International, Volume 50(5), Year 2001, Page 495. (IF-2.352)

10. Effect of Processing on the Thermal Stability of the Blends Based on Polyurethane (Part-IV).

*B. B. Khatua, M. Maity and C. K. Das**

Polymer Degradation and Stability, Volume 72(3), Year 2001, Pages 499-503. (IF-3.193)

9. Effect of Processability on the Thermal Stability of the Blends Based on Polyurethane (Part-II).

*B. B. Khatua and C. K. Das**

J. Thermal Analysis and Calorimetry, Volume 63(2), Year 2001, Pages 565-576. (IF- 2.209)

8. Polyblend Systems of Polyurethane Rubber and Silicone Rubber in the Presence of Silane Grafting Agent.

*M. Maity, B. B. Khatua and C. K. Das**

Journal of Elastomers and Plastics, Volume 33(3), Year 2001, Pages 211-224. (IF-0.783)

7. Polyblend Systems of Polyurethane (AU) and Ethylene Acrylic Elastomer (Vamac) using the Sulfur Cure Systems.

*B. B. Khatua and C. K. Das**

Journal of Applied Polymer Science, Volume 80(14), Year 2001, Pages 2737-2745. (IF-1.901)

6. Polyblend Systems of Polyurethane and HNBR Elastomers (Peroxide Cure).

*M. Maity, B. B. Khatua and C. K. Das**

International Journal of Polymeric Materials and Polymeric Biomaterials, Volume 49(4), Year 2001, Pages 407-417. (IF-2.127)

5. Effect of Processability on the Thermal Stability of the Blends Based on Polyurethane (Part-III).

*M. Maity, B. B. Khatua and C. K. Das**

Polymer Degradation and Stability, Volume 70(2), Year 2000, Pages 263-267. (IF-3.193)

4. Elastomeric Blends of Polyurethane and Polychloroprene Elastomers (Sulfur Cure) with reference to the Interchain Crosslinking Reaction.

*B. B. Khatua and C. K. Das**,

Journal of Elastomers and Plastics, Volume 32(3), Year 2000, Page 231-247. (IF- 0.783)

3. Effect of Processing on the Thermal Stability of the Blends Based on Polyurethane (Part-I).

*B. B. Khatua and C. K. Das**

Polymer Degradation and Stability, Volume 69(3) Year 2000, Pages 381-386. (IF- 3.193)

2. Effect of Blending Technique on the Properties of Polyurethane and Epichlorohydrin Blends (Sulfur Cure).

*B. B. Khatua, M. Maity and C. K. Das**

J. Appl. Polym. Sci., Volume 76, Year 2000, Pages 1367-1376. (IF- 1.901)

1. Specialty Polymer Blends of Polyurethane and Chloro-sulfonated Polyethylene (S-Cure).

BB Khatua, CK Das, PK Patra, MS Banerjee, W Millins*

International Journal of Polymeric Materials and Polymeric Biomaterials, Volume 46, Year 2000, Page 347. (I.F. -2.127)

Papers Presented in International/National Conferences

1. Speciality Polymer Blends Based on Polyurethane and Chlorosulfonated Polyethylene (Sulfur Cure).

B. B. Khatua and C. K. Das

Proceedings, *National Seminar on Advances in Science and Technology of Polymeric Materials*, (1997), IIT Chennai, India.

2. Speciality Polymer Blends of Polyurethane and Epichlorohydrin Rubber (Sulfur Cure).

B. B. Khatua, M. Maity and C. K. Das,

Proceedings, *IRC-98*, P-562, Chennai, India.

3. Polyblends System of Polyurethane and H-NBR Elastomer (Peroxide Cure).

B. B. Khatua, M. Maity, S. Raychowdhury and C. K. Das,

Elastomer-98, MIT, Chennai, India.

4. Heat Shrinkable Polymer Blends Based on EVA and Polyacrylic Rubber (AR- 31).

S. Raychowdhury, B. B. Khatua, M. Maity and C. K. Das,

Elastomer-98, MIT, Chennai, India.

5. Speciality Polymer Blends of Polyurethane and Chlorinated polyethylene (Peroxide Cure).

M. Maity, B. B. Khatua and C. K. Das,

Proceedings, *Polymer-99*, P-602, IIT Delhi, India.

6. Effect of Blending technique on the Blend Properties of Polyurethane and Chloroprene Elastomer (Sulfur cure).

B. B. Khatua and C. K. Das,

Proceedings, "*Polymer Day-2000*", 21st –24th February, (2000), Delhi, India.

7. Self-Reinforcing Composites Based on EPR/LCP Blend.

B. B. Khatua and C. K. Das,

Proceedings, *18th Rubber Conference*, 20th –21st January, (2000), Indian Rubber Manufacturer and Research Association, Thane, Mumbai, India.

8. Synthesis of Polymer/Clay Nanocomposites by Suspension Polymerization.

B. B. Khatua, A. Siegmann and M. Narkis,

Polymer For Advanced Technology (PAT), 6th International Conference, 2nd-6th September, (2001), Eilat, Israel.

9. Effect of nano clay and grafted maleic anhydride on the compatibility of Nylon 6 and Ethylene Propylene Rubber Blend System.

B. B. Khatua, and Jin Kon Kim,

Proceedings of the *3rd Annual Meeting of the Applied Rheology Center*, P-19~22, 22nd-24th January, 2003, Gyeonju, South Korea.

- 10. The Compatibility Effect of nano clay in Incompatible Polymer Blend System.**
B. B. Khatua, Dong Jun Lee and Jin Kon Kim,
Proceedings of The 3rd Japan Advanced Institute of Science and Technology – POSTECH Joint Symposium on Macromolecular Science, 8th –9th March (2003), POSTECH, South Korea.
- 11. Nano clay as an Effective Compatibilizer in Incompatible Polymer Blends.**
B. B. Khatua, D. J. Lee and Jin Kon Kim,
Proceedings, “The Polymer Society of Korea” Symposium on Polym. Sci. and Engineering, 11th–12th April, (2003), Yonsei University, Seoul, South Korea.
- 12. New Method of Compatibilizing Incompatible Polymer Blends by using Nano Clay.**
B. B. Khatua, Dong Jun Lee and Jin Kon Kim,
Proceedings of the Korean Society of Rheology Symposium, 30th May (2003), Kum Oh National University of Technology, South Korea.
- 13. Effect of Nano Clay as Compatibilizer in Nylon-6/EPR Incompatible Polymer Blend System.**
B. B. Khatua, D. J. Lee, H.Y. Kim and Jin Kon Kim,
Proceedings of The Korean-Australian Rheology Conference, 24th-26th September, (2003), Gyeongju, South Korea.
- 14. Effect of Nano Clay as Compatibilizer in Incompatible Polymer Blend System.**
B. B. Khatua, Dong Jun Lee, Hwang Yong Kim and J. K. Kim,
Proceedings of the Polymer Society of Korea, Vol 28, No. 2, Page 98, 11th October, (2003), Pukyong National University, Pusan, South Korea.
- 15. New method of compatibilizing nylon 6/EPR incompatible polymer blend system by using nanoclay.**
B. B. Khatua, D. J. Lee, H. Y. Kim, Dong Han Kho and Jin Kon Kim,
Theories and Applications of Rheology, Vol.7, No.1, P- 167-170, (2003), KIST, South Korea.
- 16. Interfacial Adhesion in Nylon-6/EPR Blends in Presence of Nanoclay and Grafted Maleic Anhydride with respect to synergistic effect.**
Sumana Mallick, Bhanu Bhusan Khatua* and Chapal Kumar Das,
Indo Swiss Bonding 08, First Indo-Swiss Bonding International Symposium on Bonding & Adhesion, MIT Campus, Anna University, Chennai, Feb 14-16, (2008), India.
- 17. Effect of organoclay on the morphology and properties of PMMA/HDPE blends.**
Sumana Mallick, Anup K Dhubar and B. B. Khatua*
Proceedings of the International conference on Hi-Tech Materials (ICHTM-09), February 11-13, 2009, P-159, IIT Kharagpur, India.
- 18. Synthesis of Exfoliated PMMA-Na⁺MMT Nanocomposites by using Clay Platelets as Suspension Stabilizer in Suspension Polymerization.**
Shyam Khatana, Anup K Dhibar and B. B. Khatua*,
Proceedings of the International conference on Hi-Tech Materials (ICHTM-09), February 11-13, 2009, P-229, IIT Kharagpur, India.

19. Synergistic Effect of Nanoclay and PE-g-MA on Morphology and Properties of Immiscible PMMA/HDPE blend.

*Sumana Mallick, B. B. Khatua**,

Proceedings of Second International Conference on Polymer Processing and Characterization (ICPPC-2010), page-170, January 15-17, 2010, Mahatma Gandhi University, Kottayam, Kerala, India.

20. Preparation of Polystyrene-Poly(methylmethacrylate)/Clay Core-Shell Nanocomposites by suspension polymerization and its characterization.

*Dibyendu Debnath and B. B. Khatua**,

Proceedings of Second International Conference on Polymer Processing and Characterization (ICPPC-2010), page-104, January 15-17, 2010, Mahatma Gandhi University, Kottayam, Kerala, India.

21. Synthesis by In-situ Polymerization and Properties of Polystyrene/MWCNT Nanocomposites, Nilesh Kumar Shrivastava.

B. B. Khatua*,

Proceeding of the International Conference MACRO 2010, Frontiers of Polymers & Advanced Materials, organized by Centre for Polymer Science and Engineering, Indian Institute of Technology, Delhi & The Society for Polymer Science, India, December 15 - 17, 2010, India Habitat Centre, New Delhi, India.

22. Effect of Nanoclay on the Morphology and Properties of Nylon 6 and Poly Methyl Methacrylate (PMMA) Blends, Sumana Mallick.

B. B. Khatua*,

Proceeding of the International Conference MACRO 2010, Frontiers of Polymers & Advanced Materials, jointly organized by Centre for Polymer Science and Engineering, Indian Institute of Technology, Delhi & The Society for Polymer Science, India, December 15 - 17, 2010, India Habitat Centre, New Delhi, India.

23. Electrical and Mechanical Properties of ABS/CNT Nanocomposites Prepared by Melt-Blending, Brajesh Singh.

B.B.Khatua*,

Proceeding of the International Conference MACRO 2010, Frontiers of Polymers & Advanced Materials, jointly organized by Centre for Polymer Science and Engineering, Indian Institute of Technology, Delhi & The Society for Polymer Science, India, December 15 - 17, 2010, India Habitat Centre, New Delhi, India.

24. Highly Reproducible PTCR Characteristics in PMMA/Ag-Coated Glass Bead Composites Based on CTE Mismatch Phenomena.

Prativa Kar, B. B. Khatua*,

Proceeding of the International Conference MACRO 2010, Frontiers of Polymers & Advanced Materials, jointly organized by Centre for Polymer Science and Engineering, Indian Institute of Technology, Delhi & The Society for Polymer Science, India, December 15 - 17, 2010, India Habitat Centre, New Delhi, India.

25. Development of Co-Continuous Phase Morphology in Highly Asymmetric Composition of PP/HDPE Blend by Using Nanoclay.

*Anup K. Dhibar, Brajesh Kumar Singh and B. B. Khatua**,

Proceeding of the National Conference on Advances in Chemical Engineering (AChemE 2011), Page-493, February 27-28, 2011, Thapar University, Department of Chemical Engineering, Patiala, Punjab, India.

26. Electrical Conductive Polycarbonate (PC)-Multiwall Carbon Nanotubes (MWCNTs) Nanocomposites with Very Low MWCNTs Loading: Preparation and Characterization.

*Sandip Maiti and B. B. Khatua**,

Proceeding of the National Conference on Advances in Chemical Engineering (AChemE 2011), Page-497, February 27-28, 2011, Thapar University, Department of Chemical Engineering, Patiala, Punjab, India.

27. Highly Exfoliated Polycarbonate Clay Nanocomposite with Retention of Transparency: Preparation and Characterization.

*Saptarshi Dhibar and B. B. Khatua**,

Proceeding of the National Conference on Advances in Chemical Engineering (AChemE 2011), Page-489, February 27-28, 2011, Thapar University, Department of Chemical Engineering, Patiala, Punjab, India.

28. Role of Nanoclay on the Morphology and Properties of Nylon6 and High Density Polyethylene (HDPE) Blends.

*Sumana Mallick, Nilesh K Shrivastava and B. B. Khatua**

Proceeding of the National Conference on Advances in Chemical Engineering (AChemE 2011), Page-505, February 27-28, 2011, Thapar University, Department of Chemical Engineering, Patiala, Punjab, India.

29. Use of Na⁺-MMT Clay Platelets as Stabilizer in the Synthesis of Highly Exfoliated PS/Na⁺-MMT Nanocomposites by Suspension Polymerization.

*Sunanda Sain, Nilesh Shrivastava and B. B. Khatua**,

Proceeding of the National Conference on Advances in Chemical Engineering (AChemE 2011), Page-501, February 27-28, 2011, Thapar University, Department of Chemical Engineering, Patiala, Punjab, India.

30. Highly Stable PTCR Characteristics of Polycarbonate/Nickel-coated Graphite Composites.

*Prativa Kar and B. B. Khatua**,

Proceeding of the National Conference on Advances in Chemical Engineering (AChemE 2011), Page-583, February 27-28, 2011, Thapar University, Department of Chemical Engineering, Patiala, Punjab, India.

31. Positive Temperature Co-efficient of Resistivity (PTCR) Behavior of HDPE-Cu Composites. *Prativa Kar and B. B. Khatua**,

Proceeding of the International Conference on Advances in Polymer Science and Rubber Technology (APSRT), Challenges Towards 2020 and Beyond, Page-152, March 3-5, 2011, Rubber Technology Centre, IIT Kharagpur, India.

32. Morphology and Properties of Nylon 6 and High Density Polyethylene (HDPE) Blends in Absence and Presence of Nanoclay.

*Sumana Mallick and B. B. Khatua**

Proceeding of the International Conference on Advances in Polymer Science and Rubber Technology (APSRT), Challenges Towards 2020 and Beyond, Page-155, March 3-5, 2011, Rubber Technology Centre, IIT Kharagpur, India.

33. Highly electrical conducting polystyrene/ MWCNT nanocomposites prepared by in-situ polymerization.

Nilesh K. Shrivastava and B. B. Khatua,

International Conference on Advancements in Polymeric Materials (APM-11), 25-27 March 2011, CIPET Chennai, India.

34. A modified polymerization technique of polymer/MWCNT nanocomposites with high electrical properties.

Nilesh K. Shrivastava, Prativa Kar and B. B. Khatua,

National Conference on Recent Advancement in Materials & Technology (NCRAMT-2011), 3-5 June 2011, HIT Haldia, India.

35. Development of electrical conductivity in poly (methyl methacrylate) (PMMA)/ multi-wall carbon nanotube (MWCNT) nanocomposites with minimum possible MWCNT loading.

Nilesh K. Shrivastava, Sandip Maity, Supratim Suin and B. B. Khatua,

International Year of Chemistry (IYC) 2011 & Symposium on Frontiers in Polymer Chemistry (FPC), 29-30 November 2011, IIT Kharagpur, India.

36. A novel method for preparation of polystyrene/MWCNT nanocomposite with high electrical conductivity by in-situ polymerization.

Nilesh K. Shrivastava, Prativa Kar and B. B. Khatua.

National Conference on Processing and Characterization of Materials (NCPCM), 1-2 December 2011, NIT, Rourkela, India.

37. Development of electrical conductivity in poly (methyl methacrylate)/MWCNT nanocomposites with minimum possible multi-wall carbon nanotube (MWCNT) loading.

Nilesh K. Shrivastava, Prativa Kar, Sandip Maiti and B. B. Khatua,

International Conference on Advancements in Polymeric Materials (APM-12), 10-12 February 2012, CIPET Ahmedabad, India.

- 38. Stable PTCR characteristics in PMMA/Ag-coated Glass Bead Composites.**
Prativa Kar and B.B. Khatua,
2nd International Conference on Advancements In Polymeric Materials (APM 2011), 25-27 March 2011, CIPET, Chennai, India.
- 39. Styrene Acrylonitrile (SAN)/Stainless Steel (SS): A Stable PTC Composites.**
Prativa Kar and B.B. Khatua,
National Conference cum Workshop on Recent Developments in Engineering Materials (RDEM), 12-14 May 2011, BIT Mishra, Ranchi, India.
- 40. Nickel-coated Graphite Filled polymeric PTC Composites.**
Prativa Kar and B. B. Khatua,
International Conference on Advances in Materials and Materials Processing (ICAMMP 2011), 9-10 December 2011, Indian Institute of Technology, Kharagpur, India.
- 41. Thermo-electric Behavior Shown by Cu powder Filled HDPE Composites.**
Prativa Kar, Nilesh K. Shrivastava and B. B. Khatua,
National Conference on Processing and Characterization of Materials (NCPCM 2011), 2-3 December 2011, National Institute of Technology, Rourkela, India.
- 42. PTCR Behavior of HDPE/Ag-coated glass bead Composites.**
Prativa Kar, MV Sridhar and B. B. Khatua,
International Conference on Advancements in Polymeric Materials (APM-12), 10-12 February 2012, CIPET Ahmedabad, India.
- 43. Optically Transparent Polycarbonate/Clay nanocomposites by Melt Blending.**
Supratim Suin, Nilesh K. Shrivastava and B.B. Khatua,
International Symposium on Recent Trends of Research in Chemistry, 31Oct-1Nov 2011, Midnapore College, Midnapore, India.
- 44. Development of highly exfoliated polycarbonate/clay nanocomposites. by melt blending.** *Supratim Suin, Nilesh K. Shrivastava, Sandip Maiti and B.B. Khatua,*
International Year of Chemistry (IYC) 2011 & Symposium on Frontiers in Polymer Chemistry (FPC), 29-30 November 2011, IIT Kharagpur, India.
- 45. Effect of Nanoclay on the Morphology and Properties of polyoxymethylene (POM)/ Acrylonitrile butadiene styrene (ABS)/Clay Nanocomposites.**
Amit Kumar Das and B. B. Khatua,*
International Conference on Functional Materials (ICFM), 5-7th February, 2014, Indian Institute of Kharagpur, Kharagpur, India.
- 46. Conducting Polystyrene Nanocomposites Based on Carbon Nanohorn and Graphene Nanoplates.** *Ranadip Bera and B. B. Khatua*,*
International Conference on Functional Materials (ICFM), 5-7th February, 2014, Indian Institute of Kharagpur, Kharagpur, India.

47. Nucleation of Gamma Poly(vinylidene fluoride) in Presence of Reduced Graphene Oxide for Energy Storage and Piezoelectric Application.

*Sumanta Kumar Karan and B. B. Khatua**,

International Symposium on Polymer Science and Technology (MACRO 2015), 23-26th January, 2015, Indian Association for the Cultivation of Science, Kolkata, India.

48. Superior Electrode Material Based on Polyaniline, Zinc Acetate and Graphene Nanoplatelets for Supercapacitor Application.

Amit Kumar Das and B. B. Khatua,

International Symposium on Polymer Science and Technology (MACRO 2015), 23-26th January, 2015, Indian Association for the Cultivation of Science, Kolkata, India.

49. High-Performance Ternary Composite Electrode Material for Next-Generation Supercapacitor Based on Polyaniline (PANI), Molybdenum Trioxide (MoO₃) and Graphene Nanoplatelets (GNP) Prepared by Sono-Chemical Method.

*Amit Kumar Das and B. B. Khatua**,

Winter School-2016 on Frontiers in Materials Science, ICMS, 05-09th December, 2016. Conference Hall, JNCASR, Bangalore, India.

50. Enhancement of Mechanical Energy Harvesting Performance of PVDF by Integrating Fe-oxides Doped Reduced Graphene Oxide.

*Sumanta Kumar Karan and B. B. Khatua**,

International Conference on Advanced Nanomaterial and Nanotechnology (ICANN-2015), 8-11th December, 2015. Centre for Nanotechnology, IIT Guwahati, Assam, India.

51. A Scalable Piezoelectric Nano generator Based on Self-Poled Fe-RGO/PVDF Flexible Nanocomposite with High Power Density and Energy Conversion Efficiency.

*Bhanu Bhusan Khatua**, *Sumanta Kumar Karan, Sarbaranjan Paria*

International Conference on Smart Energy Technologies, 23–25th August 2016. M/S Mariella, Viking Line Cruise, Stockholm, Sweden.

52. Improvement of Output Performance of PVDF by Incorporating Fe-oxides Doped Reduced Graphene Oxide: An efficient Piezoelectric Nanogenerator.

*Sumanta Kumar Karan, and Bhanu Bhusan Khatua**,

Fluoropolymer (AMERICAN CHEMICAL SOCIETY) 2-5th October, 2016. Harrah's Hotel, New Orleans, LA, USA.

53. In-situ Synthesized Fe₃O₄ Decorated Polyaniline/RGO Based Flexible Poly(vinylidene fluoride) Composites Film with Excellent Electromagnetic Interference Shielding Efficiency.

*Ranadip Bera and Bhanu Bhusan Khatua**

Fluoropolymer (AMERICAN CHEMICAL SOCIETY) 2-5th October, 2016. Harrah's Hotel, New Orleans, LA, USA.

54. A scalable and durable piezoelectric nanogenerator based on self-poled PVDF/AlO-rGO flexible nanocomposite with high power density and energy conversion efficiency.

*Sumanta Kumar Karan and **Bhanu Bhusan Khatua***,*

Winter School-2016 on Frontiers in Materials Science, ICMS, 05-09th December, 2016. Conference Hall, JNCASR, Bangalore, India.

55. Facilitated Charge Transport in PANI/ α -Ni(OH)₂/Iron Oxide Doped Reduced Graphene Oxide Composite Based Hybrid Pseudocapacitive Electrode Material for Supercapacitor with Excellent Power Characteristics.

*Amit Kumar Das, **Bhanu Bhusan Khatua***,*

India International Science Festival (IISF) - Young Scientists' Conclave (YSC), 8-11th December, 2016. Delhi, India.

56. Synergistic Effect of Fe-rGO and γ -PVDF on Enhanced Thermal Conductivity and Dielectric Property of PVDF Based Flexible Nanocomposite Film for Efficient Thermal Management and Energy Storage Applications.

*Sumanta Kumar Karan and **Bhanu Bhusan Khatua****

International Conference on Functional Materials (ICFM), 12-14th DECEMBER, 2016. Materials Science Centre, IIT Kharagpur, India.

57. Advanced High-Performance All-Solid-State Asymmetric Supercapacitor Device Based on Polypyrrole Wrapped Cobalt Vanadium Oxide Hydrate Nanocanes and Graphene Nanoplatelets for High Power Device Applications.

*Anirban Maitra and **Bhanu Bhusan Khatua***,*

International Conference on Functional Materials (ICFM), 12-14th DECEMBER, 2016. Materials Science Centre, IIT Kharagpur, India.

58. Facilitated Charge Transport in PANI/ α -Ni(OH)₂/Iron Oxide Doped Reduced Graphene Oxide Composite based Hybrid Electrode Material for Supercapacitor with Excellent Power Characteristics.

*Amit Kumar Das and **Bhanu Bhusan Khatua***,*

International Conference on Functional Materials (ICFM), 12-14th DECEMBER, 2016. Materials Science Centre, IIT Kharagpur, India.

59. Polyvinyl Chloride and Cubic ZnSnO₃ Nanoparticles Based Nanocomposite as High Output Power and Durable Piezoelectric Nanogenerator.

*Sarbaranjan Paria and **Bhanu Bhusan Khatua***,*

International Conference on Functional Materials (ICFM), 12-14th DECEMBER, 2016. Materials Science Centre, IIT Kharagpur, India.

60. In-situ Synthesized Fe₃O₄ Decorated Polyaniline/RGO Based Flexible Poly(vinylidene fluoride) Composites Film with Excellent Electromagnetic Interference Shielding Efficiency.

*Ranadip Bera and **Bhanu Bhusan Khatua***,*

International Conference on Functional Materials (ICFM), 12-14th DECEMBER, 2016. Materials Science Centre, IIT Kharagpur, India.

61. High Energy Density Ternary Composite Electrode Material Based on Polyaniline (PANI), Manganese cobaltite ($\text{MnCo}_2\text{O}_{4.5}$) and Reduced Graphene oxide prepared by hydrothermal protocol and their synergistic contributions in supercapacitive Performance.

*Lopamudra Halder and **Bhanu Bhusan Khatua***,*

International Conference on Functional Materials (ICFM), 12–14th DECEMBER, 2016. Materials Science Centre, IIT Kharagpur, India.

62. A Scalable Piezoelectric Nano generator Based on Self-Poled Fe-RGO/PVDF Flexible Nanocomposite with High Power Density and Energy Conversion Efficiency.

Bhanu Bhusan Khatua, Sumanta Kumar Karan and Sarbaranjan Paria*

NANOSMAT Conference, 11th–13th September, 2017. University Pierre & Marie Curie in Paris, France.

63. Design of Highly Durable Piezoelectric Nanogenerator Based on Self-Poled PVDF/AlO-rGO Nanocomposite with High Power Density.

*Sumanta Kumar Karan and **Bhanu Bhusan Khatua.***

E-MRS Spring Meeting and Exhibit', 22th to 26th May, 2017, Convention Centre of Strasbourg, France.

64. Facilitated charge transport in PANI/ α -Ni(OH)₂/Fe-Oxide doper RGO hybrid electrode for high performance supercapacitor.

*Amit Kumar Das and **Bhanu Bhusan Khatua***

E-MRS Spring Meeting and Exhibit', 22th to 26th May, 2017, Convention Centre of Strasbourg, France.

65. An Advanced Asymmetric Supercapacitor Device with Polypyrrole Wrapped CoV₂O₆ as positive and GNPs as negative electrode.

*Anirban Maitra and **Bhanu Bhusan Khatua***

E-MRS Spring Meeting and Exhibit', 22th to 26th May, 2017, Convention Centre of Strasbourg, France.

66. Polyvinyl Chloride and ZnSnO₃ Nanoparticles Based Nanocomposite: A High Output Power and Durable Piezoelectric Nanogenerator.

*Sarbaranjan Paria and **Bhanu Bhusan Khatua***

E-MRS Spring Meeting and Exhibit', 22th to 26th May, 2017, Convention Centre of Strasbourg, France.

67. Adjustable Electromagnetic Shielding Efficiency by Compressible Light Weight Porous PDMS/Fe₃O₄ Decorated RGO/SWCNH Composite.

*Ranadip Bera and **Bhanu Bhusan Khatua***

E-MRS Spring Meeting and Exhibit', 22th to 26th May, 2017, Convention Centre of Strasbourg, France.

Scopus links:

1. <https://www.scopus.com/authid/detail.uri?authorId=57200569504>

2. <https://www.scopus.com/authid/detail.uri?authorId=37107293700>

Google Scholar link:

<https://scholar.google.co.in/citations?user=KaYk8oIAAAAJ&hl=en&oi=ao>