Dr. Javed Alam

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Professional Profile

Associate Professor 2017 to continue…..	King Abdullah Institute for Nanotechnology, King Saud University, Kingdom of Saudi Arabia, Tel: +966-1-467-0664; Fax: +966-1-467-0662
Assistant Professor YEAR 2010 to 2017	King Abdullah Institute for Nanotechnology, King Saud University, Kingdom of Saudi Arabia
Research Associate (R.A) 2009	Project title- Development of anticorrosive nano material coatings (CSIR), Jamia Millia Islamia, New Delhi-025 India (2009) India –Project code: 9/466(0/09)2K9-EMR-1

Educational Qualifications

PhD (Chemistry, Polymer Science) 2009
Thesis title-Development, Characterizations and Application Studies of Ferrite containing Nanoconducting Polymers
Jamia Millia Islamia, (Central University), New Delhi, India (2009) Advisor: Prof. Sharif Ahmad

Master of Science (MSc in Polymer Science and Technology) 2004
Chemistry; Polymer Science and Technology
CCS University Meerut; UP India

Research Projects Involvement

Principle Investigator; 2018- continue) Deanship of Scientific Research; Polymer nanocomposite membranes for water treatment applications.

Principle Investigator; (2012-2014) Development of Biodegradable Polymeric Electro active Shape Memory Nano composites Actuator for Potential Medical and Industrial Applications; National Science, Technology and Innovation Plan (NSTIP), Project No; 11-NAN-1486-02

Co-Investigator; (2012-2015) Mixed Matrix Dual-Layer Nanocomposite Hollow-Fiber Membranes for Desalination; National Science, Technology and Innovation Plan (NSTIP), Project No; 11-NAN-1486-02S

Professional/Society Membership

American Chemical Society (ACS; Member Number 30770862)

Publications/Presentations

Scopus: 1077 Total Citations, H-Index of 17
Google Scholar: 1197 Total Citation, H-index of 19
1 Book and Chapter in Books
49 Published Journal Papers
15 Published Conference Proceedings
21 Other Technical Reports and Presentations

Published Book Chapter

Book entitled "**Carbon-based Polymer Nanocomposites for Environmental and Energy Applications, 1st Edition**, ISBN: 9780128135747, Published Date: 1st April 2018, Page 412
Chapter entitled-**Carbon-Based Polymer Nanocomposites as Electrodes for Microbial Fuel Cells**
Tahereh Jafary, Mostafa Ghasemi, **Javed Alam**, Saad A. Aljlil, Suzana Yusup
© 2018 Elsevier, DOI: https://doi.org/10.1016/B978-0-12-813574-7.00015-0
2018

Published Research Papers

1- **Graphene oxide, an effective nanoadditive for a development of hollow fiber nanocomposite membrane with antifouling properties**
Javed Alam*, Arun Kumar Shukla, Mansour Alhoshan, Lawrence Arockiasamy Dass, Fekri, Abdulraqeb Ahmed Ali, **Advances in Polymer Technology, 00:1–12** **2018**

2- **Removal of heavy metal ions using a carboxylated graphene oxide-incorporated polyphenylsulfone nanofiltration membrane**
Arun Kumar Shukla, **Javed Alam***, Mansour Alhoshan, Lawrence Arockiasamy Dass, Fekri, Abdulraqeb Ahmed Ali
Environmental Science: Water Research & Technology, DOI: 10.1039/C7EW00506G **2018**

3- **Temperature-Responsive Polymer Microgel-Gold Nanorods Composite Particles: Physicochemical Characterization and Cytocompatibility**
Khan A, Khan TH, Ahamed M, El-Toni AM, Aldalbahi A, **Alam J**, Ahamad T. **Polymers** 10(1):99.
2018

4- **Bacilli as Biological Nano-factories Intended for Synthesis of Silver Nanoparticles and Its Application in Human Welfare**
Varish Ahmad Qazi, Mohammad Sajid Jamal, Arun K. Shukla, **Javed Alam,** Ahamad Imran, Usama Mohamed Abaza, **Journal of Cluster** **2017**

5- **κ-Carrageenan as a promising pore-former for the preparation of a highly porous polyphenylsulfone membrane**
Javed Alam, Mansour Alhoshan, Arun Kumar Shukla, Ali Aldalbahi, Fekri Abdulraqeb Ahmed Ali, Lawrence Arockiasamy Dass, M.R. Muthumareeswaran, **Materials Letters**, Volume 204, 2017, Pages 108-111. **2017**

6- **Bacilli as Biological Nano-factories Intended for Synthesis of Silver Nanoparticles and Its Application in Human Welfare**
Varish Ahmad Qazi, Mohammad Sajid Jamal, Arun K. Shukla, **Javed Alam,** Ahamad Imran, Usama Mohamed Abaza, **Journal of Cluster Science,** 2017, Volume 28, Issue 4, Page 1775–1802 **2017**

7- **Development of a nanocomposite ultrafiltration membrane based on polyphenylsulfone blended with graphene oxide,** Arun Kumar Shukla ,**Javed Alam,** Mansour Alhoshan , Lawrence Arockiasamy Dass ,Muthumareeswaran MR**, Scientific Report -Nature** **2017**

8- **Separation of proteins and antifouling properties of polyphenylsulfone based mixed matrix hollow fiber membranes,** Lawrence Arockiasamy Dass , Mansour Alhoshan , **Javed Alam** , Muthumareeswaran MR, Alberto Figoli, Arun Kumar Shukla, **Separation and Purification Technology** 174:529–543 **2017**

9- **Tubular Poly(ε-caprolactone)/Chitosan Nanofibrous Scaffold Prepared by Electrospinning for Vascular Tissue Engineering Applications**, Mohammed Fayez Al Rez, Abdullah Binobaid, Abdulmajeed Alghosen, Eraj Humayun Mirza, **Javed Alam,** H. Fouad, Mohamed Hashem, Hussain Alsalman, Hassan Mohammed Almalak, Amer Mahmood, Ihab Moussa, and Fawzi F. Al-Jassir, **Journal of Biomaterials and Tissue Engineering**, 7, 427–436 **2017**

10- **Atomic layer deposition of TiO2 film on a polyethersulfone membrane: separation applications,** **Javed Alam**, Mansour Alhoshan**,** Lawrence Arockiasamy Dass**,** Arun Kumar Shukla**,** M. R. Muthumareeswaran**,** Mukhtar Hussain, Abdullah S. Aldwayyan**, Journal of Polymer Research**, 23:183 **2016**

11- **Polysulfone–poly (Orthotoluidine) nanocomposite membrane with an improved separation performance,** Mansour Alhoshan, **Javed Alam**, Aslam Khan, Fahad Surur Al Shabouna, Senthivel Sasivarnam, Lawrence Arockiasamy Dass and Arun Kumar Shukla**, Polymer Composites**, Published online **2016**

12- **Production of hydrogen by Enterobacter aerogenes in an immobilized cell reactor,** Ibdal Satar, Mostafa Ghasemi, Saad A. Aljlil, Wan Nor Roslam Wan Isahak, Abdalla M. Abdalla, **Javed Alam**, Wan Ramli Wan Daud, Mohd Ambar Yarmo, Omid Akbarzadeh**, International Journal of Hydrogen Energy** **2016**

13- **Green synthesis and antifungal activity of Al2O3 NPs against fluconazole-resistant Candida spp isolated from a tertiary care hospital,** Mohammad Jalal, Mohammad Azam Ansari, Arun Kumar Shukla, Syed G. Ali, Haris M. Khan, Ruchita Pal, **Javed Alam** and Swaranjit Singh Cameotra**, RSC Advances**,6, 107577-107590 **2016**

14- **Sulfonated poly ether ether ketone with different degree of sulphonation in microbial fuel cell: Application study and economical analysis,** Mostafa Ghasemi, Wan Ramli Wan Daud, **Javed Alam**, Yaghoob Jafari, Mehdi Sedighi, Saad A. Aljlil, Hamid Ilbeygi**,** International **Journal of Hydrogen Energy**, 41, 4862–4871 **2016**

15- **Treatment of two different water resources in desalination and microbial fuel cell processes by poly sulfone/Sulfonated poly ether ether ketone hybrid membrane,** Mostafa Ghasemi, Wan Ramli Wan Daud, **Javed Alam**, Hamid Ilbeygi, Mehdi Sedighi, Ahmad Fauzi Ismail, Mohammad H. Yazdi, Saad A. Aljlil, **Energy**, 96, 303-313. **2016**

16- **Influence of Multiwalled Carbon Nanotubes on Biodegradable Poly(lactic acid) Nanocomposites for Electroactive Shape Memory Actuator**, Mohan Raja, j. Subha, **Javed Alam**, Advances in Polymer Technology, 21664, 10.1002/adv.21664 **2016**

17- **Electroactive Shape Memory Property of a Cu-decorated CNT Dispersed PLA/ESO Nanocomposite. Javed Alam,** Manawwer Alam, Raja Mohan, Aslam Khan Materials 2015, 8, 6391-6400. **2015**

18- **Influence of Hexamethylenediamine Functionalized Graphene Oxide on Structural Characteristics and Properties of Epoxy Nanocomposites**. **Javed Alam,** Sung Hun Ryu; A. M. Shanmugharaj, Science of Advanced Materials 7 (5) 993-1001(9) **2015**

19- **Performance Comparison of Three Common Proton Exchange Membranes for Sustainable Bioenergy Production in Microbial Fuel Cell,** Mostafa Ghasemi, Elnaz Halakoo, Mehdi Sedighi, **Javed Alam,** Majid Sadeqzadeh, Procedia CIRP, Volume 26, 2015, Pages 162-166, **2015**

20- **MWCNTs-Reinforced Epoxidized Linseed Oil Plasticized Polylactic Acid Nanocomposite and Its Electroactive Shape Memory Behaviour, Javed Alam,** A Manawwer, R Mohan, A Zainularifeen, International Journal of Molecular Sciences 15 (11), 19924-19937 **2014**

21- **Performance enhancement of microbial fuel cell by PVDF/Nafion nanofibre composite proton exchange membrane,** AFI Samaneh Shahgaldi, Mostafa Ghasemi, Wan Ramli Wan, Javed Alam Fuel Processing Technology 124 (-), 290-295 **2014**

22- **Development of plasticized PLA/NH2-CNTs nanocomposite: potential of NH2-CNTs to improve electroactive shape memory properties, Javed Alam**, M Alam, L Arockiasamy Dass, AM Shanmugharaj, M Raja Polymer Composites, Wiley 35(11) 2129-2136 **2014**

23- **Advances in Membrane Development Based on Electrically Conducting Polymers, Javed Alam**, LA Dass, MS Alhoshan, AW Mohammad, Advances in Polymer Technology 32 (S1), 189-197 **2013**

24- **Synthesis and optimization of PES-Fe3O4 mixed matrix nanocomposite membrane: Application studies in water purification, Javed Alam**, LA Dass, M Ghasemi, M Alhoshan Polymer Composites 34 (11), 1870-1877 **2013**

25- **Carbon nanotubes-blended poly (phenylene sulfone) membranes for ultrafiltration applications,** DL Arockiasamy, **Javed Alam**, M Alhoshan , Applied Water Science 3 (1), 93-103 **2013**

26- **Fabrication of polysulfone/ZnO membrane: influence of ZnO nanoparticles on membrane characteristics,** M Alhoshan, **Javed Alam**, LA Dass, N Al-Homaidi Advances in Polymer Technology 32 (3) **2013**

27- **Improvement of Microbial Fuel Cell Performance by Using Nafion Polyaniline Composite Membranes as a Separator,** N Mokhtarian, M Ghasemi, WRW Daud, M Ismail, G Najafpour, **Javed Alam,** Journal of Fuel Cell Science and Technology 10 (4), 041008 **2013**

28- **Mixed-matrix membranes for desalination of water, Javed Alam**, LA Dass, M Alhoshan, Society of Plastic Engineering http://www.4spepro.org **2013**

29- **Iron oxide nanoparticle-induced oxidative stress and genotoxicity in human skin epithelial and lung epithelial cell lines,** M Ahamed, H A Alhadlaq, **Javed Alam**, M Khan, D Ali, S Alarafi, Current pharmaceutical design 19 (37), 6681-6690 **2013**

30- **Optimisation of polyethersulfone/polyaniline blended membranes using response surface methodology approach,** NF Razali, AW Mohammad, N Hilal, CP Leo, **Javed Alam,** Desalination 311, 182-191 **2013**

31- **The effect of nitric acid, ethylenediamine, and diethanolamine modified polyaniline nanoparticles anode electrode in a microbial fuel cell ,** M Ghasemi, WRW Daud, N Mokhtarian, A Mayahi, M Ismail, F Anisi, ... **Javed Alam,** International Journal of Hydrogen Energy 38 (22), 9525-9532 **2013**

32- **Carbon nanotube as an alternative cathode support and catalyst for microbial fuel cells** M Ghasemi, M Ismail, SK Kamarudin, K Saeedfar, WRW Daud, ... **Javed Alam**, Applied Energy 102, 1050-1056 **2013**

33- **Development of polyaniline-modified polysulfone nanocomposite membrane, Javed Alam**, LA Dass, MS Alhoshan, M Ghasemi, AW Mohammad, Applied Water Science 2 (1), 37-46 **2012**

34- **Polysulfone composed of polyaniline nanoparticles as nanocomposite proton exchange membrane in microbial fuel cell,** M Ghasemi, M Rahimnejad, C Esmaeili, WRW Daud, MS Masdar, ...**Javed Alam,** American Journal of Biochemistry and Biotechnology 8 (4), 311 **2012**

35- **Recent advances in conjugated polymers for light emitting devices,** MS AlSalhi, **Javed Alam**, LA Dass, M Raja, International journal of molecular sciences 12 (3), 2036-2054 **2011**

36- **Nanostructured polyaniline reinforced sustainable resource (soy oil alkyd) based composites** **Javed Alam**, U Riaz, S Ahmad, Polymer Composites 31 (1), 32-37 **2010**

37- **High performance corrosion resistant polyaniline/alkyd ecofriendly coatings, Javed Alam**, U Riaz, S Ahmad, Current Applied Physics 9 (1), 80-86 **2009**

38- **Soft template synthesis of super paramagnetic Fe3O4 nanoparticles a novel technique** S Ahmad, U Riaz, A Kaushik, **Javed Alam**, Journal of Inorganic and Organometallic Polymers and Materials 19 (3), 355-360 **2009**

39- **Development of sustainable resource-based nanostructured polyaniline/castor oil polyurethane composites,** S Ahmad, U Riaz, **Javed Alam,** Advances in Polymer Technology 28 (1), 26-31 **2009**

40- **Iron oxide nanoparticles–chitosan composite based glucose biosensor,** A Kaushik, R Khan, PR Solanki, P Pandey, **Javed Alam**, S Ahmad, ...Biosensors and Bioelectronics 24 (4), 676-683 **2008**

41- **Corrosion-protective performance of nano polyaniline/ferrite dispersed alkyd coatings** **Javed Alam**, U Riaz, SM Ashraf, S Ahmad, Journal of Coatings Technology and Research 5 (1), 123-128 **2008**

42- **Development of nanostructured polyaniline dispersed smart anticorrosive composite coatings** **Javed Alam**, U Riaz, S Ahmad , Polymers for Advanced Technologies 19 (7), 882-888 **2008**

43- **Effect of ferrofluid concentration on electrical and magnetic properties of the Fe3O4/PANI nanocomposites , Javed Alam**, U Riaz, S Ahmad, Journal of magnetism and magnetic materials 314 (2), 93-99 **2007**

44- **Electrochromic properties of polyaniline thin film nanostructures derived from solutions of ionic liquid/polyethylene glycol,** M Deepa, S Ahmad, KN Sood, **Javed Alam**, S Ahmad, AK Srivastava, Electrochimica acta 52 (26), 7453-7463 **2007**

International Conference Proceedings

1) Synthesis of poly (o-toluidine)-mixed polysulfone nanocomposite membrane for desalination; 1st International Conference on Desalination using Membrane Technology; http://www.desalinationusingmembrane.com/index.html **2014**

2) **Poly(phenylene sulfone)(PPSU) and TiO2 hybrid nanocomposite membranes for desalination** 1st International Conference on Desalination using Membrane Technology; http://www.desalinationusingmembrane.com/index.html 6th IWA Specialist Conference on

Membrane Technology for Water and Waste water treatment, , 4-7 October 2011,Eurogress, Aachen, Germany **2014**

3) **Carbon Nanotubes Based Flexible Transparent Conducting Films for Display Applications"** International conference, the Nineteenth in a series, on Processing and Fabrication of Advanced Materials to be held at Auckland, New Zealand in 14-17 January, 2011. Oral; **http://aut.researchgateway.ac.nz/bitstream/handle/10292/2558/PaxtonR_PFAM_10292-2558.pdf?sequence=5** **2011**
4) **Development of PANI/Polysulfone nanocomposites: New generation membrane materials" International conference, the Nineteenth in a series, on Processing and Fabrication of Advanced Materials to be held at Auckland, New Zealand in 14-17 January, 2011; http://aut.researchgateway.ac.nz/bitstream/handle/10292/2558/PaxtonR_PFAM_10292-2558.pdf?sequence=5** **2011**
5) **Javed Alam, Ufana Riaz and Sharif Ahmad, title "International conference on corrosion [CORCON-2007]" Mumbai, India; http://www.dkagencies.com/doc/from/1063/to/1123/bkId/DK37523394552321976816173131371/details.html** **2007**
6) **Javed Alam, Ufana Riaz and Sharif Ahmad title "International conference on advanced materials and composites [ICAMC 2007]", Thiruvananthapuram Kerala, India** **2007**

Instruments Handling/Experience

- Scanning Electron Microscope (SEM) and Atomic Force Microscope (AFM)
- Contact Angle Meter, and Electrokinetic (Streaming Potential) Analyser
- Thermo Gravimetric Analysis (TGA) and Differential Scanning Calorimetry (DSC)
- Universal Tensile Testing Machines – LLOYD
- Rheometer
- Membrane porosity- Capillary Flow Porometer

Membrane casting and Performance studies

- Trirs Rayflow lab scale UF/NF cross flow module
- Sterlitech RO cross flow testing unit
- Amicon UF and MF dead end cells
- Sterlitech RO Dead end cell
- Hollow fiber UF testing Unit

Membrane preparation and modification

- Automatic membrane casting unit
- Hollow fiber spinning machine
- Spin Coater