



Department of Chemistry
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Dr. A. B. M. Mamun Jamal

Professor

Research Area Reviewer Guest Editor, International Journal of Electrochemistry, (special issue: Recent Advances in Electrochemical Sensors), Hindawi Publisher. Editorial Board Member Research area UPCOMING CONFERENCE / MEETING 1st International Conference on Chemical Science and Technology (ICCST-Chem), February 24-25, 2018, KUET, Khulna, Bangladesh 26th World Congress on Biosensors, 25-27 May 2016, Gothenburg, Sweden For the advancement of science in developing countries, 30th Nov - 4th Dec 2015, Italy 16th Asian chemical congress (16ACC), 16-19 March, 2016, Dhaka, Bangladesh

Education

PhD in Chemistry (Bioelectro-Analytical)

University of Limerick, Ireland()

MSc in Chemistry (Physical-Inorganic)

University of Dhaka, Bangladesh()

BSc (Hons) in Chemistry

University of Dhaka, Bangladesh()

HSC

Govt. Titumir College, Bangladesh()

SSC

Monipur High School, Bangladesh()

Service Records

- **Professor**
Department/Section: Chemistry
Khulna University of Engineering & Technology From 01-01-1970 to 01-01-1970
Responsibility: Teaching and Research
- **Associate Professor**
Department/Section: Department of Chemistry
Khulna University of Engineering & Technology From 01-01-1970 to 01-01-1970
- **Postdoctoral Fellow**
Department/Section: Applied Sciences
ITT-Tallaght, Dublin, Ireland From 01-01-1970 to 01-01-1970
Working Area: Chemistry
- **Postdoctoral Fellow**
Department/Section: Material & Surface Sciences Institute
University of Limerick, Limerick, Ireland From 01-01-1970 to 01-01-1970
Working Area: Chemistry
- **Researcher**
Department/Section: Microsystem Centre
Tyndall National Institute, UCC, Cork, Ireland From 01-01-1970 to 01-01-1970
Working Area: Chemistry
- **Scientist**
Department/Section: Environment Directorate
Cork County Council, Cork, Ireland From 01-01-1970 to 01-01-1970
Working Area: Waste Enforcement
- **Assistant Professor**
Department/Section: Chemistry
Khulna University of Engineering & Technology, Bangladesh From 01-01-1970 to 01-01-1970

Research Interest

Reviewer

(i) Journal of Electrochemical Society (ECS) (ii) Biosensors & Bioelectronics (Elsevier) (iii) ACS Polymer (ACS) (iv) Plos One

Guest Editor, International Journal of Electrochemistry, (special issue: Recent Advances in Electrochemical Sensors), Hindawi Publisher.

Editorial Board Member

American Journal of Physical Chemistry and Chemical Physics, Am. Assoc. Sc. & Tc. (AASCIT)

Research area

Advanced materials, Bio-electrochemistry, Electrocatalysis, Sensors, Biosensors

UPCOMING CONFERENCE / MEETING

1st International Conference on Chemical Science and Technology (ICCST-Chem), February 24-25, 2018, KUET, Khulna, Bangladesh

<http://iccstk.com/>

26th World Congress on Biosensors, 25-27 May 2016, Gothenburg, Sweden

<http://www.biosensors-congress.elsevier.com/>

For the advancement of science in developing countries, 30th Nov - 4th Dec 2015, Italy

<http://twas.org/opportunity/twas-science-diplomacy-workshop-sustainable-water-management>

16th Asian chemical congress (16ACC), 16-19 March, 2016, Dhaka, Bangladesh

<http://www.16acc.org/>

Publication

Books

1. (2004) , **Pesticides, veterinary and other chemical residues in food** , ISBN:9781855737341,Woodhead Publishing Ltd., Cambridge, England
2. Razeeb,K. M. , Jamal,M. , Xu,J. , Hasan,M. and Lefèvre,a. V. L. (2011) , **Nanowires: Properties, Synthesis, and Applications** , ISBN:978-1614701293,Nova Science Publishers
3. (2011) , **Analog Circuit Design: Robust Design, Sigma Delta Converters, RFID** , ISBN:978-9400703902,Springer
4. Razeeb,K. M. , Hasan,M. , Jamal,M. and Mathewson,A. (2015) , **Handbook of Nanoelectrochemistry: Electrochemical Synthesis Methods, Properties and Characterization Techniques** , ISBN:978-3319152653,Springer
5. Razeeb,K. M. , Jamal,M. , Hasan,M. and Mathewson,A. (2015) , **Nanobiosensors and Nanobioanalyses** , ISBN:978-4431551898,Springer
6. (2010 (monograph)) , **Biosensor for androgens: Sample matrix effect: screen printed and carbon fibre electrode** , ISBN:978-3843386623,Lap Lambert Academic Publishing, Germany

Journals

20. Jamal,M. , Dey,T. K. , Nasrin,T. and Razeeb,A. K. a. K. M. (2020) , " Nanostructured materials for sensing pH: evolution and challenges," **Submitted**
19. Islam,J. , Shao,H. , Badal,M. R. and Jamal,K. M. R. a. M. (2021) , " Pencil graphite as electrode platform for free chlorine sensors and energy storage devices," **Accepted, Plos One**, PLOS
19. Dey,T. K. and Jamal,M. E. U. a. M. (2021) , " Detection and removal of microplastics in wastewater: evolution and impact," **Accepted, Environmental Science & Pollution Research**, Springer
18. Jamal,M. , Shao,H. , Islam,J. and Razeeb,M. M. R. B. a. K. M. (2020) , " Disposable and low cost free chlorine sensor based on pencil drawn paper electrode," **Submitted**
17. (2019) , " Development of tungsten oxide nanoparticle modified carbon fibre cloth as flexible pH sensor," **Scientific Reports**, Nature Research, vol9, 4659
16. Jamal,M. ,Szeffler,A. and Bond,C. K. a. N. (2019) , " Commercial and household food waste separation behaviour and the role of Local Authority " a case study," **Int J Recycl Org Waste Agricult**, Springer, vol8, pp.281-290
16. Jamal,M. , Chakrabarty,S. , Yousuf,M. A. , Khosla,A. and Razeeb,K. M. (2018) , " Micro and nanostructure based electrochemical sensor platform for glutamate detection," **Microsystem Technologies**, Springer, vol24, pp.4193-4206
15. (2018) , " A non enzymatic glutamate sensor based on Nickel Oxide nanoparticle," **Microsystem Technologies**, Springer, vol24, pp.4217-4223
10. (2014) , " Antimicrobial properties of vertically aligned nano-tubular copper," **Materials Letters**, Elsevier, vol128, pp.60-63
9. Devlin,L. , Jamal,M. and Razeeb,K. M. (2013) , " Novel pH sensor based on anthraquinone"ferrocene modified free standing gold nanowire array electrode," **Analytical Methods**, Royal Society of Chemistry (RSC), vol5, pp.880 - 884
8. Smet,V. , Jamal,M. , Waldron,F. , Stam,F. , Mathewson,A. and Razeeb,K. M. (2013) , " High-temperature die-attach technology for power devices based on thermocompression bonding of thin Ag films," **IEEE Transactions on Components, Packaging and Manufacturing Technology**, IEEE, vol3, pp.533- 542
7. Jamal,M. , Hasan,M. , Schmidt,M. , Petkov,N. , Mathewson,A. and Razeeb,K. M. (2013) , " Shell@ Core coaxial NiO@ Ni nanowire arrays as high performance enzymeless glucose sensor," **Journal of The Electrochemical Society**, Electrochemical Society, USA, vol160, pp.B207-B212

6. Jamal, M., Hasan, M., Mathewson, A. and Razeed, K. M. (2013), " Disposable sensor based on enzyme-free Ni nanowire array electrode to detect glutamate," **Biosensors & Bioelectronics**, Elsevier, vol40, pp.213-218
5. Hasan, M., Jamal, M. and Razeed, K. M. (2012), " Coaxial NiO/Ni nanowire arrays for high performance pseudocapacitor applications," **Electrochimica Acta**, Elsevier, vol60, pp.193-200
4. Jamal, M., Hasan, M., Mathewson, A. and Razeed, K. M. (2012), " Non-enzymatic and Highly Sensitive H₂O₂ Sensor Based on Pd Nanoparticle Modified Gold Nanowire Array Electrode," **Journal of The Electrochemical Society**, Electrochemical Society, USA, vol159, pp.B825-B829
3. Jamal, M., Shaikh, F., Aslam, B. and Razeed, K. (2012), " Sensor and biosensor to detect vascular graft infection: diagnosis and challenges," **Analytical Methods**, Royal Society of Chemistry (RSC), vol4, pp.1865-75
2. Jamal, M., Xu, J. and Razeed, K. M. (2010), " Disposable biosensor based on immobilisation of glutamate oxidase on Pt nanoparticles modified Au nanowire array electrode," **Biosensors & Bioelectronics**, Elsevier, vol26, pp.1420-24
1. Jamal, M. and Magner, S. S. a. E. (2004), " Conductive copolymer modified carbon fibre microelectrodes: electrode characterization and electrochemical detection of p-amino phenol," **Sensors & Actuators B**, Elsevier, vol97, pp.59-66
1. Jamal, M. and Magner, M. C. a. E. (2005), " Characterization of the composition of bovine urine and its effect on the electrochemical analysis of the model mediator p-aminophenol," **Analytical Chimica Acta**, Elsevier, vol554, pp.79-85
1. Jamal, M., Worsfold, O., McCormac, T. and Dempsey, E. (2009), " A stable and selective electrochemical biosensor for the liver enzyme alanine aminotransferase (ALT)," **Biosensors & Bioelectronics**, Elsevier, vol24, pp.2926-30

Conference

20. (2017), "Non-Enzymatic Glutamate Sensor Based on Nickel Oxide Nanoparticle," **231st ECS Meeting**, The Electrochemical Society, pp.1943
19. (2017), "Development of WO₃ Nanoparticle Based pH Sensor," **231st ECS Meeting**, The Electrochemical Society, pp.1948
18. J., A., Yousuf, Y., A., M., Razeed, R., Jamal, M. K. and M., M. (2017), "Hydrothermal Synthesis of Metal Oxide (NiO, CuO, ZnO and WO₃) Nanoparticles and Their Antimicrobial Properties," **231st ECS Meeting**, The Electrochemical Society, pp.1949
17. (2017), "Disposable Chlorine Sensor Based on Pencil Graphite Electrode," **231st ECS Meeting**, The Electrochemical Society, pp.1947
16. Rahman, A. and Yousuf, M. J. a. M. A. (2016), "Physico-chemical and bacteriological analyses of tube well water in khulna city corporation of Bangladesh," **16th ASIAN CHEMICAL CONGRESS (16ACC)**
10. M., J., M., H., M., S., N., P., A., M. and KM., R. (2013), "Fabrication of vertically aligned co-axial Ni@NiO nanowire array electrode platform to detect glucose," **223rd ECS Meeting, Toronto, Ontario, Canada**
9. M., J., B., A., M., H., A., M. and KM., a. R. (2012), "Non-Enzymatic Hydrogen Peroxide Sensor based on Nanostructured Metallic Array Electrodes: A Comparative Study," **221st Electrochemical Society Meeting, May 6-11 â€" Seattle, Washington, USA**
8. M., J., B., A., M., H., A., M. and KM., a. R. (2012), "Fabrication of nanoparticle modified nanowire array electrode to detect liver enzyme alanine aminotransferase (ALT)," **22nd World Congress on Biosensors, Cancun, Mexico**
7. V., S., M., J., A., M. and KM., a. R. (2012), "Thermo-compression Bonding of Ag-MWCNTs Nanocomposite Films as an Alternative Die-Attach Solution for High Temperature Packaging of SiC Devices," **62nd ECTC 2012, San Diego, Calif., USA**, pp.231-237
6. M., J., M., H., A., M. and KM., a. R. "Fabrication of Pt Nanoparticle Modified 3-D Cu Nanotube Array Electrode and Its Electro-Catalytical Activity towards H₂O₂," **ECS 219th Meeting, Montreal, QC, Canada**, 2011
6. M., J. and KM., J. X. a. R. (2010), "Disposable biosensor based on immobilisation of glutamate oxidase on gold nanowire array electrode: sample matrix effect," **World Congress on Biosensors, Glasgow, UK**
6. M., J., M., H., J., M., A., M. and KM., a. R. (35, 2011), "Fabrication of Horseradish Peroxidase Modified 3D Pt Nanowire Array Electrode and its Electro-Catalytical Activity towards H₂O₂," **ECS Transactions, USA**, pp.53-59
5. M., H., M., J. and KM., a. R. (2011), "Dispersion of Niobium Oxide on Carbon and Copper Nanotubes and Their Application as Supercapacitor Electrodes," **ECS 219th Meeting, Montreal, QC, Canada**
5. M., G., M., J. and SAM., T. (2009), "Stress relief patterns in bone-like apatite films prepared by a sol-gel technique," **E-MRS 2009 Spring Meeting, Strasbourg, France**
5. M., J., M., G. and SAM., a. T. (2009), "Heterogenous nucleation and bone-like texture evolution in synthetic hydroxyapatite films," **22nd European Conference on Biomaterials, ESB 2009, Lausanne, Switzerland**
4. M., J., M., P., M., G. and SAM., T. (2009), "The limit to Zn substitution in nanocrystalline hydroxyapatite: A theoretical and experimental study," **Nano-Bio-tech, 2009, Montreux, Switzerland**
1. (19-24th of June 2003), "Characterization of electrochemical properties of bovine urine as a sample matrix for hormone residue analysis," **17th International Symposium on Bioelectrochemistry and Bioenergetics**
1. (6-10th of June 2004), "Modification and characterisation of carbon fibre to develop a biosensor," **10th International Conference on Electroanalysis**
1. (9th â€"10th September 2004), "Analysis of sample matrix effects on electrochemical biosensor in a biological fluid," **3rd biennial conference on Analytical Sciences in Ireland (RSC)**
1. (31st January 2004), "Development of biosensor for hormone residue analysis," **14th Irish Environmental Researchers Colloquium**