

# MD.ASIF IQUBAL



## CURRICULUM VITAE

### Personal Details

- Name: Mr. Md. Asif Iqubal
- Present status: Presenting my Ph.D.
- Address: Department of Chemistry, Indian Institute of Technology Roorkee (IITR), Roorkee-247 667, India
- Contact: +919634978966
- E-mail: [asifiqubal.88@gmail.com](mailto:asifiqubal.88@gmail.com); [zibandcy@iitr.ac.in](mailto:zibandcy@iitr.ac.in)
- Languages: English, Bengali and Hindi
- Nationality: Indian

### Summary

- Excellent analytical and problem-solving skills;
- Sound knowledge in both organic and inorganic synthetic techniques, including characterization of materials using different state of art techniques like XRD, Small angle XRD, Raman, XPS, FTIR, FE-SEM, TEM, AFM, SQUID, VSM, HPLC, HRMS, LC-MS and many others also;
- Strong ability to work in teams and collaborations; and
- Extensive experience with public speaking, including voice and dialogue training.

### Educational Qualifications

Course	University/Board	Percentage (%)	Year of Passing	Class	Subjects
Ph.D.	Indian Institute of Technology Roorkee	-	2017	-	Prebiotic Chemistry
M.Sc.	University of Calcutta	82.7	2012	1 <sup>st</sup>	Chemistry with specialization in organic Chemistry
B.Sc.	University of Calcutta	60	2010	1 <sup>st</sup>	Chemistry (honours), Mathematics, Physics and Environmental science
10+2	West Bengal Council of Higher Secondary Education	72.90	2006	1 <sup>st</sup>	Chemistry, Mathematics, Physics and Biological sciences
10	West Bengal Board of Secondary Education	81.75	2003	1 <sup>st</sup>	Science, Arts and Literature

### Awards/Fellowship

- Junior research fellowship (JRF) from December 10, 2012 to December 09, 2014 and Senior research fellowship (SRF) from December 10, 2014 to December 09, 2015 for carrying out prebiotic chemistry experiment awarded by Indian Space Research Organisation (ISRO), Department of Space, Government of India
- Senior research fellowship (SRF) from December 10, 2015 to December 09, 2017 for carrying out doctoral work in the field of origin of life awarded by Ministry of Human Resource Development (MHRD), Government of India;
- Qualified in national level Gratitude Test of Engineering (GATE) in Chemistry discipline, conducted by MHRD
- Selected as one of the 11 candidates to give an oral talk in the “Space Factor” contest in European Astrobiology Network Association Conference (EANA 2016), Athens, Greece, September 27-30, 2016
- First recipient of the SohanJheeta Travel Award to participate in 16<sup>th</sup> European Astrobiology Network Association Conference (EANA) held on September 27-30, 2016, in Athens, Greece
- Recipient of the SohanJheeta Travel Award, given by Network of Researchers on Horizontal Gene Transfer and the Last Universal Cellular Ancestor (NoR HGT & LUCA), at the Open University, Milton Keynes, United Kingdom (UK), on November 3-4, 2016.

### Research Interest

- Prebiotic Chemistry
- Origin of Life
- Astrobiology
- Catalysis.

### List of Publications

#### A. Prebiotic Chemistry

- 1) **Iqbal, M. A.**, Sharma, R. and Kamaluddin (2016). “Surface Interaction of Ribonucleic Acid Constituents with Spinel Ferrite Nanoparticles: A Prebiotic Chemistry Experiment”, *RSC Advances*, DOI: 10.1039/C6RA12247G
- 2) Sharma, R., **Iqbal, M. A.** and Kamaluddin (2016). Possible role of Prussian blue nanoparticles in chemical evolution: interaction with ribose nucleotides. *International Journal of Astrobiology*, 15(01), 17-25
- 3) Jassal, V., Shanker, U., Gahlot, S., Kaith, B. S., **Iqbal, M. A.**, & Samuel, P. (2016). “Sapindus mukorossi mediated green synthesis of some manganese oxide nanoparticles interaction with aromatic amines”. *Applied Physics A*, 122(4), 1-12
- 4) **Iqbal, M. A.**, Sharma, R. and Kamaluddin (2015). “Studies on interaction of ribonucleotides with zinc ferrite nanoparticles using spectroscopic and microscopic techniques”. *Karbala International Journal of Modern Science*, 1(1), 49-59
- 5) Sharma, R., Kumar, A., **Iqbal, M. A.** and Kamaluddin (2015). “Role of Double Metal Cyanides in Chemical Evolution: Interaction of Ribose Nucleotides with Metal Hexacyanocobaltate (III)”. *Journal of Astrobiology & Outreach*, 3:138. doi:10.4172/2332-2519.1000138

- 6) **Iqbal, M. A.**, Sharma, R., Kamaluddin and Jheeta, S. (2017). Thermal Condensation of Glycine and Alanine on Metal Ferrite Surface: Primitive Peptide Bond Formation Scenario. *Life*, 7(2), 15
- 7) Sharma, R., **Iqbal, M. A.**, Kamaluddin and Jheeta, S. (2017). Adsorption and Oxidation of Aromatic Amines on Metal (II) Hexacyanocobaltate (III) Complexes: Implication for Oligomerization of Exotic Aromatic Compounds. *Inorganics*, 5(2), 18

## B. Catalysis

- 1) Molla, R. A., **Iqbal, M. A.**, Ghosh, K., & Islam, S. M. (2016). "A route for direct transformation of aryl halides to benzyl alcohols via carbon dioxide fixation reaction catalyzed by a (Pd@ N-GMC) palladium nanoparticle encapsulated nitrogen doped mesoporous carbon material". *Green Chemistry*. DOI: 10.1039/C6GC01038E
- 2) Ghosh, K., Molla, R. A., **Iqbal, M. A.**, Islam, S. S., & Islam, S. M. (2016). "Ruthenium nanoparticles supported on N-containing mesoporous polymer catalyzed aerobic oxidation of biomass-derived 5-hydroxymethylfurfural (HMF) to 2, 5-diformylfuran (DFF)". *Applied Catalysis A: General*, 520, 44-52
- 3) Molla, R. A., Ghosh, K., Banerjee, B., **Iqbal, M. A.**, Kundu, S. K., Islam, S. M., & Bhaumik, A. (2016). "Silver nanoparticles embedded over porous MOF for CO<sub>2</sub> fixation via carboxylation of terminal alkynes at ambient pressure". *Journal of Colloid and Interface Science*, 477, 220-229
- 4) Ghosh, K., Molla, R. A., **Iqbal, M. A.**, & Islam, S. M. (2015). "A mesoporous organosilica grafted Pd catalyst (MOG-Pd) for efficient base free and phosphine free synthesis of tertiary butyl esters via tertiary-butoxycarbonylation of boronic acid derivatives without using carbon monoxide". *Green Chemistry*, 17(6), 3540-3551
- 5) Ghosh, K., **Iqbal, M. A.**, Molla, R. A., Mishra, A., Kamaluddin, & Islam, S. M. (2015). "Direct oxidative esterification of alcohols and hydration of nitriles catalyzed by a reusable silver nanoparticle grafted onto mesoporous polymelamine formaldehyde (AgNPs@ mPMF)". *Catalysis Science & Technology*, 5, 1606-1622
- 6) Molla, R. A., **Iqbal, M. A.**, Ghosh, K., Kamaluddin, & Islam, S. M. (2015). "Nitrogen enriched mesoporous organic polymer anchored copper (II) material: an efficient and reusable catalyst for the synthesis of esters and amides from aromatic systems". *Dalton Transactions*, 44(14), 6546-6559
- 7) Molla, R. A., **Iqbal, M. A.**, Ghosh, K., Roy, A. S., Kamaluddin & Islam, S. M. (2014). "Mesoporous poly-melamine-formaldehyde stabilized palladium nanoparticle (Pd@ mPMF) catalyzed mono and double carbonylation of aryl halides with amines". *RSC Advances*, 4(89), 48177-48190
- 8) Islam, S. M., Ghosh, K., Roy, A. S., Molla, R. A., Salam, N., Chatterjee, T., & **Iqbal, M. A.** (2014). "Polystyrene anchored ruthenium (II) complex catalyzed carbonylation of nitrobenzene and amines for the synthesis of disubstituted ureas". *Journal of Organometallic Chemistry*, 772, 152-160
- 9) Islam, S. M., Ghosh, K., Molla, R. A., Roy, A. S., Salam, N., & **Iqbal, M. A.** (2014). "Synthesis of a reusable polymer anchored cobalt (II) complex for the aerobic oxidation of alkyl aromatics and unsaturated organic compounds". *Journal of Organometallic Chemistry*, 774, 61-69
- 10) Islam, S. M., Molla, R. A., Roy, A. S., Ghosh, K., Salam, N., **Iqbal, M. A.**, & Tuhina, K. (2014). "Aerobic oxidation and oxidative bromination in aqueous

- medium using polymer anchored oxovanadium complex”. *Journal of Organometallic Chemistry*, 761, 169-178
- 11) Molla, R. A., Roy, A. S., Ghosh, K., Salam, N., **Iqbal, M. A.**, Tuhina, K., & Islam, S. M. (2015). “Polymer anchored ruthenium complex: A highly active and recyclable catalyst for one-pot azide–alkyne cycloaddition and transfer-hydrogenation of ketones under mild conditions”. *Journal of Organometallic Chemistry*, 776, 170-179
  - 12) Molla, R. A., **Iqbal, M. A.**, Ghosh, K., and Islam, M. (2016). “Nitrogen-Doped Mesoporous Carbon Material (NMC) as a Highly Efficient Catalyst for Carbon Dioxide Fixation Reaction with Epoxides under metal–free condition”. *ChemistrySelect*, 1(12), 3100-3107

### Oral Presentations

- 1) Kamaluddin and **Iqbal, M. A.**, “Interaction of Metal Oxides with Biomolecules: Implication in Astrobiology”, COSPAR 40<sup>th</sup> scientific assembly Russia, Moscow, 2-10 August 2014;
- 2) **Iqbal, M. A.** and Kamaluddin, “Studies on the Interaction of Nucleic Acid Components on Nanosized Zinc Ferrite”, 51<sup>st</sup> annual convention of chemists Kurukshetra University, Kurukshetra, 9-12, December 2014;
- 3) **Iqbal, M. A.** and Kamaluddin, “Spinel Ferrite Nanoparticles and Its Application in Origin of Life Processes, International Conference on Advanced Materials for Energy”, Environment and Health, Department of Chemistry, Indian Institute of Technology Roorkee, March 4-7, 2016;
- 4) **Iqbal, M. A.** and Kamaluddin, “Surface Attachment of Ribonucleic Acid Monomer on Spinel Ferrite Nanoparticles: A Prebiotic Chemistry Scenario”, European Astrobiology Network Association Conference, EANA 16, Athens, Greece, September 27-30, 2016; and
- 5) **Iqbal, M. A.** and Kamaluddin, “Thermal Condensation of Glycine and Alanine on Metal Ferrite Surface: Primitive Peptide Bond Formation Scenario”, 3<sup>rd</sup> NoR HGT & LUCA meeting (**invited talk**), Open University, United Kingdom (UK), on November 3-4, 2016.

### Workshop/Seminar participated

- 1) “Training Workshop on Reference Management Software-Mendeley”, Organized by Mahatma Gandhi Central Library, IIT Roorkee, January 28, 2017
- 2) “Seminar on Plagiarism and Impact of Research” Organized by Mahatma Gandhi Central Library, IIT Roorkee, March 4, 2017

### Computer skill

- Proficient in Word, Excel, Access PowerPoint, Internet and email, FORTRAN.

### Interests and Hobbies

- Travelling;
- Listening to music of all genres; and
- Net surfing.

**Declaration:**

I hereby declare that all the details given above are true to the best of my knowledge and belief.

**Md. Asif Iqbal**  
**Date: 16-06-2017**