

FATHIMA SIFANI ZAVAHIR

CARREER OBJECTIVE

A dedicated, energetic and self-motivated researcher in Chemistry with a touch of Physics and Polymer Engineering who enjoy facing new challenges and who wants to diversify the extensive knowledge in a professional environment.

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Doha Qatar



PROFESSIONAL AND LABORATORY EXPERIENCE

December 2016 to present: –	Post Doc Centre for Advanced Materials Qatar University, Qatar	
July 2016 to December 2016:–	Research Assistant Materials Research Lab Virginia Commonwealth University-Qatar	
February 2012 to June 2016:–	Postgraduate Researcher Faculty of Science and Engineering Queensland University of Technology, Australia	
January 2011 to February 2012:–	Lecturer, Department of Chemistry University of Sri Jayewardenepura, Sri Lanka	
August 2010 to January 2011:–	Teaching Assistant, Department of Chemistry University of Sri Jayewardenepura, Sri Lanka	
July 2009 to August 2009:–	Trainee, Research and Development Laboratory Sithara Printing Inks (Pvt) Ltd, Sri Lanka	

EDUCATIONAL QUALIFICATIONS

February 2012 to June 2016: -	PhD in Chemistry (Nanotechnology and Material Science) Queensland University of Technology, Australia	
May 2005 to August 2010: -	BSc (Hons) in Chemistry (First Class) University of Sri Jayewardenepura, Sri Lanka	

HONORS AND ACHIEVEMENTS

- **Professor Tuley de Silva Gold Medal:** For obtaining a First Class pass with highest marks at the Bachelor of Science Special Degree (Chemistry) Examination.
- **Professor W. S. Fernando Gold Medal:** For obtaining the highest GPA for Physical and Inorganic Chemistry (Core and Compulsory courses) in the third and fourth year, and a First Class in the Bachelor of Science Special Degree (Chemistry) Examination.
- **Chemical Industries Colombo (CIC) Ltd Award:** For the best performance in the Chemistry Special (Part I) Examination.

- Completed the **British Computer Society (BCS) Professional Examinations Certificate, Diploma, PGD Levels (November 2006 to May 2005)**

RESEARCH AND PUBLICATIONS

Journal Articles:

- Sifani Zavahir**, Igor Krupa, Sumaya AlMaadeed, Jan Tkac and Peter Kasak*. Polyzwitterionic hydrogels in engines based on the antipolyelectrolyte effect and driven by the salinity gradient. *Environ. Sci. Technol.*, 2019, doi: 10.1021/acs.est.8b06377.
- Sifani Zavahir**, Jian Zhao, Sarina Sarina, Steven Bottle, Mark Wellard, Jianfeng Jia, Yiming Huang, James P. Blinco, Haishun Wu and Huai-Yong Zhu*. Selective oxidation of aliphatic alcohols using molecular oxygen at ambient temperature: Mixed-valence vanadium oxide photocatalysts. *ACS Catalysis*, 2016, 6, 3580-3588.
- Sifani Zavahir** and Huaiyong Zhu*. Visible light induced green transformation of primary amines to imines using a silicate supported anatase photocatalyst. *Molecules*, 2015, 20, 1941-1954.
- Qi Xiao, Zhe Liu, Arixin Bo, **Sifani Zavahir**, Sarina Sarina, Steven Bottle, Jamie Riches, and Huaiyong Zhu*. Catalytic transformation of aliphatic alcohols to corresponding esters in O₂ under neutral conditions using visible light irradiation. *J. Am. Chem. Soc.*, 2015, 137, 1956-1966.
- Zhanfeng Zheng, Chao Chen, Arixin Bo, **Fathima Sifani Zavahir**, Eric Waclawik, Jian Zhao, Dongjiang Yang and Huaiyong Zhu*. Visible light induced selective photocatalytic oxidation of benzylamine to imines over supported Ag/AgI photocatalysts. *ChemCatChem*, 2014, 6, 1210-1214.
- Jaroslav Filip, **Sifani Zavahir**, Ludmila Klukova, Jan Tkac and Peter Kasak*. Immobilization of concanavalin A lectin on a reduced graphene oxide-thionine surface by glutaraldehyde crosslinking for the construction of an impedimetric biosensor. *J. Electroanal. Chem.*, 2017, 794, 156-163.
- Jaroslav Filip, **Sifani Zavahir**, Lorencova Lenka, Tomas Bertok, Ammar Bin Yousaf, Khalid Mahmoud and Peter Kasak*. Tailoring Electrocatalytic Properties of Pt Nanoparticles Grown on Ti₃C₂T_x (MXene) Surface, *J. Electrochem. Soc.*, 2019, 166, H54-H62.
- Khoulood Jlassi, * **Sifani Zavahir**, Peter Kasak, Igor Krupa, Ahmed A. Mohamed, Mohamed M. Chehimi. Emerging clay-aryl-gold nanohybrids for efficient proton reduction, *Energy Convers. Manag.*, 2018, 168, 170-177.
- Ammar Bin Yousaf, Sajeda Adnan Mutlaq Alsaydeh, **Fathima Sifani Zavahir**, Peter Kasak and Syed Javaid Zaidi Ultra-low Pt-decorated NiCu bimetallic alloys nanoparticles supported on reduced graphene oxide for electro-oxidation of methanol. *MRS Commun.*, 2018, 3, 1050-1057.
- Jaroslav Mosnacek, Josef Osicka, Anton Popelka, **Sifani Zavahir**, Redhoune Ben Hamadou and Peter Kasak*. Photochemical grafting of polysulfobetaine onto polyethylene and polystyrene surfaces and investigation of long term stability of polysulfobetaine layer in sea water. *Polym. Adv. Technol.*, 2018, 29, 1930-1938.
- Sifani Zavahir**, Kristy Vernon, Zhe Liu and Huai-Yong Zhu*. Mesoporous silica supported gold catalyst for redox reactions under visible light irradiation and its correlation with field enhancement. Manuscript under review.
- Peter Kasak, Martin Danko, **Sifani Zavahir**, Miroslav Mrlik, Yuan Xiong, Ammar Yousaf, Wing-Fu Lai, Igor Krupa, Jan Tkac, and Andrey Rogach*. Identification of Molecular Fluorophore as a Component of Carbon Dots able to Induce Gelation in a Fluorescent Multivalent-Metal-Ion-Free Alginate Hydrogel. *Sci. Rep.*, 2019, 9, 1-11.
- Ammar Bin Yousaf, Muhammad Imran, Peter Kasak, **Fathima Sifani Zavahir**, Syed Javaid Zaidi, Carlos Fernandez Enhanced and durable electrocatalytic performance of thin layer PtRu bimetallic alloys on Pd-nanocubes for methanol oxidation reactions. *Catal. Sci. & Technol.*, 2017, 7, 3283-3290.

INSTRUMENTAL EXPERIENCE

Competent in sample preparation, testing and interpretation of the results related to the following instruments

- Light absorption tests** (Cary 5000 UV-Vis-NIR spectrophotometer for solid samples and Cary 50, 100 for liquid samples)

- **FTIR tests** (Nicolet FTIR spectrometer with a diamond ATR)
- **X-ray diffraction tests** (PANalytical Cu/Co MPD)
- **Surface area and porosity tests of materials** (Particle Analyzer- TriStar 3020)
- **Transmission Electron Microscopoe** (JEOL- 2100FS, Bruker EDX scanner attached for line profiling)
- **Scanning Electron Microscope** (Zeiss Sigma FESEM, Quanta 3D FIB)
- **Gas Chromatography** (Agilent) & **Gas Chromatography-Mass Spectrometer** (GC-MS Agilent)
- **Thermo Gravimetric Analyser & Contact Angle measurements**
- **Galvanostat/ Potentiostat**
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- **Dynamic Light Scattering instrument**
- **Electro Spinning device**
- **RF plasma and Corona plasma devices**

EXTRAS

Participated in a three days workshop “**Teaching Advantage**”, specially designed for early career academics by Learning and Teaching Unit, Queensland University of Technology, Australia.

NON-RELATED REFEREES

Available upon request