

Curriculum Vitae



Position/Designation: Asst. Professor

Department: Biological Sciences and Chemistry

College: Arts and Sciences

University of Nizwa, Sultanate of Oman

Personal Information
Name: Fathima Shahitha Marital Status: Married Email Address: Fathima.Hussai@unizwa.edu.om Contact Numbers: 71198930
Academic Qualifications
<ul style="list-style-type: none">• PhD Chemistry, National University of Singapore, Singapore.• M.Sc. Chemistry (by research), National University of Singapore, Singapore.• M.Tech. Metallurgical engineering, Mangalore University, India.• M.Sc., Chemistry (by course), Madurai Kamaraj, India.• B.Sc. Chemistry, Madurai Kamaraj University, Department of Chemistry, India.
Teaching Activities, Current / Previous Experience
Asst.Professor , January 2020 till date, CAS, DBSC. Teaching <ul style="list-style-type: none">• Spring semester 2019/2020, CHEM 340 – Analytical Chemistry for pharmacy. Senior Lecturer , April 2010 to April 2019, Faculty of Industrial Sciences & Technology, Universiti Malaysia Pahang, Malaysia. Teaching <ul style="list-style-type: none">• Semester 1 Session 2018/2019, BSK1143 - Inorganic Chemistry.• Semester 1 Session 2018/2019, BSK1422 - Inorganic Chemistry Laboratory.• Semester 1 Session 2018/2019, BSK4153 - Advanced Instrumentation Technique.• Semester 2 Session 2017/2018, BSK1143 - Inorganic Chemistry.• Semester 2 Session 2017/2018, BSK1422 - Inorganic Chemistry Laboratory.

- Semester 2 Session 2017/2018, BSK2452 - Material Chemistry Laboratory.
- Semester 1 Session 2017/2018, BSK1143 - Inorganic Chemistry.
- Semester 1 Session 2017/2018, BSK1422 - Inorganic Chemistry Laboratory.
- Semester 1 Session 2017/2018, BSK4153 – Advanced Instrumentation Technique.
- Semester 1 Session 2017/2018, BSK2452 - Material Chemistry Laboratory.
- Semester 2 Session 2016/2017, BSK1143 - Inorganic Chemistry.
- Semester 2 Session 2016/2017, BSK1422 - Inorganic Chemistry Laboratory.
- Semester 2 Session 2016/2017, BSK2452 - Material Chemistry Laboratory.
- Semester 2 Session 2016/2017, BSK2123 - Material Chemistry.
- Semester 1 Session 2016/2017, BSK1143 - Inorganic Chemistry.
- Semester 1 Session 2016/2017, BSK1422 - Inorganic Chemistry Laboratory.
- Semester 1 Session 2016/2017, BSK4153 – Advanced Instrumentation Technique.
- Semester 1 Session 2016/2017, BSK2123 - Material Chemistry.
- Semester 1 Session 2016/2017, BSK2452 - Material Chemistry Laboratory.
- Semester 2 Session 2015/2016, BSK1143 - Inorganic Chemistry.
- Semester 2 Session 2015/2016, BSK1422 - Inorganic Chemistry Laboratory.
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- Semester 1 Session 2015/2016, BSK1143 - Inorganic Chemistry.
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- Semester 1 Session 2014/2015, BSK1143 - Inorganic Chemistry.
- Semester 1 Session 2014/2015, BSK1422 - Inorganic Chemistry Laboratory.
- Semester 1 Session 2014/2015, BSK4153 – Advanced Instrumentation Technique.
- Semester 2 Session 2013/2014, BSK1143 - Inorganic Chemistry.
- Semester 2 Session 2013/2014, BSK1422 - Inorganic Chemistry Laboratory.
- Semester 1 Session 2013/2014, BSK1143 - Inorganic Chemistry.
- Semester 1 Session 2013/2014, BSK1422 - Inorganic Chemistry Laboratory.
- Semester 1 Session 2013/2014, BSK 3153 - Organic Chemistry Process.
- Semester 2 Session 2012/2013, BSK1143 - Inorganic Chemistry 1.
- Semester 2 Session 2012/2013, BSK1422 - Inorganic Chemistry Laboratory.
- Semester 1 Session 2012/2013, BSK1422 - Inorganic Chemistry Laboratory.
- Semester 1 Session 2012/2013, BSK1143 - Inorganic Chemistry 1.
- Semester 2 Session 2011/2012, BSK1143 - Inorganic Chemistry 1.
- Semester 2 Session 2011/2012, BSK1422 - Inorganic Chemistry Laboratory.
- Semester 1 Session 2011/2012, BSK3643 - Industrial Environment & Pollution.
- Semester 1 Session 2011/2012, BSK1143 - Inorganic Chemistry 1.
- Semester 1 Session 2011/2012, BSK1422 - Inorganic Chemistry Laboratory.
- Semester 2 Session 2010/2011, DUK1123 - General Chemistry.
- Semester 2 Session 2010/2011, BSB1441 - Bioanalytical Chemistry Laboratory.
- Semester 1 Session 2010/2011, BSK3543 - Industrial Environment & Pollution.

Research Activities

(includes but not limited to research interests, conference attendance, conference presentations and publications, refereed journal, articles ,books, etc.)

Research interests:

- Skin aging is a complex involving various factors like, cellular metabolism, genetics, hormone, chemicals, toxins and metabolic processes. Currently we are developing technologies to overcome aging process. The most important dermal skin matrix constituents are Glycosaminoglycans (GAGs) assisting in binding water. Hyaluronic acid (HA) is a natural polymer found throughout human body in various tissue and fluids. It is largely found in the skin, extra-cellular matrix (ECM), synovial fluid and vitreous body of the eye. In our research we focus on modifying the properties of hyaluronic acid (HA) in order to get the perfect injectable form of HA that can be used in aging process.
- Nanomaterials- Involves the synthesis, characterization and application of metal nanoparticles and nanofibers which includes gold, silver, iron and nickel nanoparticles as well as free standing metal nanofibers of gold, silver and other metals.
- Tissue engineering- Developing scaffolds that mimic the architecture of tissue at the nanoscale is one of the major challenges in the field of tissue engineering. Our research involves the fabrication and characterization of nanofibrous scaffolds from biocompatible polymers and its application in bone and skin tissue engineering.

conference presentations:

- Hassanal H., C, Fathima S. J. H., Yusoff M. M., Biomimetic scaffolds from hydroxyethyl cellulose/calcium phosphate for bone tissue engineering applications. International Conference on Innovative Research in Science, Technology and Management (ICIRSTM-17), Singapore, 16-17 September 2017.
- Sasikala A, Fathima S. J. H., PremaLakshmi, Yusoff M. M., Green synthesis and characterization of hydroxyethyl cellulose based silver nanoparticles and its antibacterial activity. International Conference on Material, Mechatronics and Industrial Engineering (ICMMIE 2015), Kuala Lumpur-Malaysia, 25-26 December 2015.
- Sasikala A, Fathima S. J. H., PremaLakshmi, Yusoff M. M., Sasikala A, Fathima S. J. H., PremaLakshmi, Yusoff M. M., Hydroxyethyl cellulose stabilized copper nanoparticles and its antibacterial Activity. International Conference on Material, Mechatronics and Industrial Engineering (ICMMIE 2015), Kuala Lumpur-Malaysia,

25-26 December 2015.

- Hassanal H., C, Fathima S. J. H., Yusoff M. M., Electrospun hydroxyethyl cellulose nanofibers functionalized with calcium phosphate coating for bone tissue engineering. International conference on chemical industry and science, Kuching-Malaysia, 27-28 February 2015.
- Farah H. Z., Fathima S. J. H., Yusoff M. M., Fabrication of nanofibrous hydroxyethyl cellulose/ poly (vinyl alcohol) scaffolds for skin tissue engineering. Nanosmat-USA (NANOSMAT), USA-Texas, 19-22 May 2014.
- Gurumurthy H., Sasikala A., Fathima S. J. H., Yusoff M. M., F53-Nanostructured photosensitive materials incorporated biocomposite polymers for flexible photonic devices. Joint international conference on nanoscience, engineering and management (BOND21), Malaysia, 19-20 August 2013.
- Farah H. Z., Sugandha C, Fathima S. J. H., Yusoff M. M., Scaffolds from chemically modified cellulose nanofibers for skin tissue engineering, Malaysian Technical Universities Conference on Engineering & Technology (MUCET), Malaysia, 3-4 December 2013.
- Sugandha C, Farah H. Z., Fathima S. J. H., Yusoff M. M., In vitro mineralization of electrospun hydroxyethyl cellulose/PVA nanofibers for bone tissue engineering, Malaysian Technical Universities Conference on Engineering & Technology (MUCET), Malaysia, 3-4 December 2013.
- Farah H. Z., Sugandha C, Fathima S. J. H., Yusoff M. M., Electrospun nanofibrous mats of modified cellulose as potential scaffold for skin tissue engineering, Conference on Industry-Academia Joint Initiatives in Biotechnology (CIA: Biotech 13), Malaysia, 5-7 December 2013.
- Sugandha C, Fathima S. J. H., Yusoff M. M., Bone-like apatite coating on electrospun hydroxyethyl cellulose/polyvinyl alcohol nanofibers for bone tissue engineering, Conference on Industry-Academia Joint Initiatives in Biotechnology (CIA: Biotech 13), Malaysia, 5-7 December 2013.
- Sasikala A, Fathima S. J. H., Yusoff M. M., A study on the size effect of HEC capped silver nanoparticles on the antibacterial activity, Conference on Industry-Academia Joint Initiatives in Biotechnology (CIA: Biotech 13), Malaysia, 5-7 December 2013.
- Sugandha C, Fathima S. J. H., Yusoff M. M., Biomimetic growth of bone-like apatite via simulated body fluid on hydroxyethyl cellulose/poly vinyl alcohol electrospun nanofibers, The 2nd International Conference on Biomedical Engineering and

Biotechnology (iCBEB 2013), China, 11-13 October 2013.

- Fathima S. J. H., Yusoff M. M., Fabrication and characterization of electrospun silver nanofibers with unmatched porosity, 12th International Conference on Nanotechnology (IEEE NANO2012), Birmingham UK, 20-23 August 2012.
- Farah H. Z., Sugandha C, Nurul N. H., Badhrulhisham A. A., Fathima S. J. H., Yusoff M. M., Electrospun Nanofibers For Bone Tissue Regeneration, international conference on nanotechnology (ICONT 2012), Malaysia, 30 May-1 June 2012.
- Sugandha C, Farah H. Z., Fathima S. J. H., Yusoff M. M., Characterization of HEC/PVA blend nanofibers produced by electrospinning, National conference for post graduate research 2012 (NCON 2012), Malaysia, 8-9 September 2012.
- Farah H. Z., Sugandha C, Fathima S. J. H., Yusoff M. M., Cross-linking effect on electrospun hydroxyethyl cellulose/ poly (vinyl alcohol) nanofibrous scaffolds, National conference for post graduate research 2012 (NCON 2012), Malaysia, 8-9 September 2012.
- Sugandha C, Fathima S. J. H., Yusoff M. M., Characterization of modified cellulose (MC)/ poly (vinyl alcohol) electrospun nanofibers for bone tissue engineering, Malaysian Technical Universities Conference on Engineering and Technology (MUCET) 2012, Malaysia, 20-21 November 2012.
- Farah H. Z., Sugandha C, Fathima S. J. H., Yusoff M. M., Cross-linking effect on electrospun hydroxyethyl cellulose/poly(vinyl alcohol) nanofibrous scaffolds, Malaysian Technical Universities Conference on Engineering and Technology (MUCET) 2012, Malaysia, 20-21 November 2012.
- Fathima S. J. H., Yusoff M. M., Synthesis of gold dendrites in a green chemistry approach using hydroxyethyl cellulose, 2nd International Conference on Nanotechnology and Biosensors (ICNB 2011), 28-30 December 2011.
- Fathima S. J. H., Yusoff M. M., Izan I. M., Synthesis of silver nanoparticles in a green chemistry approach using hydroxyethyl cellulose and its antibacterial activity, Malaysian Technical Universities Conference on Engineering & Technology (MUiCET), Malaysia, 13-15 November 2011.
- Fathima S. J. H., Valiyaveettil S., Electrospinning of Poly (vinyl alcohol) nanofibers containing one-dimensional (1D) arrangement of silver nanoparticles for catalytic applications, 3rd MRS-Conference on Advanced Materials (MRS-S), Singapore, 25-27 February 2008.
- Fathima S. J. H., Valiyaveettil S., Fabrication of dimple structured Au nanofibers using

electrospun polymer nanofibers as template, 3rd MRS-Conference on Advanced Materials (MRS-S), Singapore, 25-27 February 2008.

- Fathima S. J. H., Asharani P. V., Valiyaveettil S., Hydroxyethyl cellulose scaffolds for Tissue Engineering, 234th ACS National Meeting, Boston, MA, 19-23 August 2007.
- Fathima S. J. H., Valiyaveettil S., Antibacterial Nanofibers of Hydroxyethyl cellulose / Poly (vinyl alcohol) embedded with Silver Nanoparticles, International conference on materials for advanced technologies (ICMAT), Singapore, 1-6 July 2007.
- Fathima S. J. H., Valiyaveettil S., Surface-Enhanced Raman Spectroscopy Using Floret Shaped Silver Nanoparticles Embedded in Thin Film of Hydroxyethyl Cellulose, International conference on materials for advanced technologies (ICMAT), Singapore, 1-6 July 2007.
- Bindhu L., Asharani P. V., Fathima S. J. H., Valiyaveettil S., Biomimetic peptide amphiphiles modified nanofibre mesh as a scaffold for Tissue Engineering, MRS meeting, San Francisco, 9-13 April 2007.
- Bindhu L., Asharani P. V., Fathima S. J. H., Valiyaveettil S., Peptide modified polymer nanofibers as biomimetic extracellular matrices for optimized cell adhesion and differentiation, 234th ACS National Meeting, Boston, MA, 19-23 August 2007.
- Dhanya P. G., Basheer C., Lee H. K., Fathima S. J. H., Valiyaveettil S., Extraction of Polar Organic Pollutants from Stormwater Sample using Biocompatible Nanomembrane, 5th Singapore International Chemical Conference (SICC 5), Singapore, 16-19 December 2007.
- Basheer C., Fathima S. J. H., Nurhanim M. H., Lee H. K., Valiyaveettil S., Dechlorination and in-situ hydrogenolysis of persistent organic chemicals using nanomembrane supported catalysis, 5th Singapore International Chemical Conference (SICC 5), Singapore, 16-19 December 2007.
- Fathima S. J. H., Valiyaveettil S., Snake –shaped Gold Nanostructures by Hydroxyethyl cellulose Mediated Synthesis, 4th Singapore International Chemical Conference (SICC 4), Singapore, 8-10 December 2005.

- Basheer C., Vetrichelvan M., Fathima S. J. H., Promoda A. P. P., Lee H. K., Valiyaveetil S., Oxidation of Indene in a Silicon-Microreactor and Glass Capillary-Microreactor. 1st Nano-Engineering & Nano-Science Congress, Singapore, 7-9 July 2004.
- Basheer C., Sindhu S., Fathima S. J. H., Lee H. K., Valiyaveetil S., Capillary microreactor for the selective oxidation and condensation reactions using porous sponge gold (O) catalyst". 25th International Symposium on Chromatoography, October 2004.
- Basheer C., Vetrichelvan M., Fathima S. J. H., Lee H. K., Valiyaveetil S., Oxidation of Cyclohexene Reaction in a Simple Microfluidic System, Thin Films 2004 and Nanotech 2004 Conference and Exhibition, Singapore, 13-17 July 2004.
- Basheer C., Fathima S. J. H., Lee H. K., Valiyaveetil S., Capillary microreactor for efficient suzuki coupling reactions, 3rd Singapore International Chemical Conference (SICC 3), 15-17 Dec 2003.

Organization of conferences

- National conference on industry-academia initiatives in biotechnology, CIA:BIOTECH 13, member of the scientific committee, Malaysia, 5-7 December 2013.
- Advanced Materials conference 2016-AMC2016, Technical reviewer, Langkawi Island, Kedah, Malaysia, 28-29 November 2016.
- Session chair, International Conference on Material, Mechatronics and Industrial Engineering (ICMMIE 2015), Kuala Lumpur-Malaysia, 25-26 December 2015.
- International conference on nanotechnology (ICONT 2012), Judge for the poster session, Malaysia, 30 May-1 June 2012.

Publications:

- Farah H. Z., Fathima S. J. H., Harun W.S.W., Yusoff M. M., Highly porous of hydroxyethyl cellulose biocomposite scaffolds for tissue engineering, Journal – International Journal of biological macromolecules 2019, 122, 562-571. (IF: 4.784)

- Farah H. Z., Fathima S. J. H., Nurul A.M.R., Yusoff M. M., Carboxymethyl cellulose nanofibres impregnated with silver nanoparticles for tissue engineering applications, Journal – Materials Today: Proceedings 2019, 16, 1715-1721. (IF: 0.694)
- Farah H. Z., Fathima S. J. H., Yusoff M. M., Mohammad Syaiful Bahari A. R., A facile synthesis method of hydroxyethyl cellulose silver nanoparticle scaffolds for skin tissue engineering applications, Journal – Materials Science & Engineering C 2017, 79, 151-160. (IF: 5.08)
- Sugandha C, Fathima S. J. H., Arun Kumar, Mohammad Syaiful Bahari A. R., Yusoff M. M., Nano-hydroxyapatite coated hydroxyethyl cellulose/poly(vinyl) alcohol electrospun scaffolds and their cellular response, Journal – International Journal of Polymeric Materials and Polymeric Biomaterials 2016, 66, (3), 115-122. (IF: 2.263)
- Sugandha C, Fathima S. J. H., Arun Kumar, Mohammad Syaiful Bahari A. R., Yusoff M. M., Fabrication, characterization and in vitro biocompatibility of electrospun hydroxyethyl cellulose/poly (vinyl) alcohol nanofibrous composite biomaterial for bone tissue engineering, Journal – Chemical Engineering Science, 2016, 144, 17-29. (IF: 3.372)
- Sasikala A, Fathima S. J. H., PremaLakshmi, Yusoff M. M., Green synthesis and characterization of hydroxyethyl cellulose based silver nanoparticles and its antibacterial activity, Journal- Journal of Scientific Research and Development 2015, 2 (14): 79-85. Science impact Factor: 1.69
- Sasikala A, Fathima S. J. H., PremaLakshmi, Yusoff M. M., Hydroxyethyl cellulose stabilized copper nanoparticles and its antibacterial Activity, Journal- Journal of Applied Sciences Research 2015, 11 (24), 67-73.
- Hassanal H., C, Fathima S. J. H., Yusoff M. M., Electrospun hydroxyethyl cellulose nanofibers functionalized with calcium phosphate coating for bone tissue engineering, Journal –Australian Journal of Basic and Applied Sciences 2015, 9 (37), 185-190.
- Sugandha C, Fathima S. J. H., Yusoff M. M., Electrospun hydroxyethyl cellulose nanofibers functionalized with calcium phosphate coating for bone tissue engineering, Journal –RSC Advances 2015, 5, 29497-29504. (IF: 3.049)
- Farah H. Z., Fathima S. J. H., Yusoff M. M., Mohammad Syaiful Bahari A. R., In vitro degradation study of novel HEC/PVA/collagen nanofibrous scaffold for skin tissue engineering applications., Polymer degradation and stability 2014, 110, 473-481. (IF: 3.78)
- Farah H. Z., Fathima S. J. H., Yusoff M. M., Mohammad Syaiful Bahari A. R., Improved cellular response of chemically crosslinked collagen incorporated hydroxyethyl cellulose/poly (vinyl) alcohol nanofibers scaffold, Journal of Biomaterials Application 2014, 0-0, 1-14. (IF: 2.764)
- Farah H. Z., Fathima S. J. H., Yusoff M. M., Mohammad Syaiful Bahari A. R.,

Nanostructured materials from hydroxyethyl cellulose for skin tissue engineering, Carbohydrate Polymers 2014, 114, 238-245. (IF: 6.044)

- Sugandha C, Fathima S. J. H., Yusoff M. M., Biomimetic growth of bone-like apatite via simulated body fluid on hydroxyethyl cellulose/poly vinyl alcohol electrospun nanofibers, Bio-medical materials and engineering 2014, 24, 799-806. (IF: 0.993)
- Farah H. Z., Sugandha C, Fathima S. J. H., Yusoff M. M., Cross-linking effect on electrospun hydroxyethyl cellulose/poly(vinyl alcohol) nanofibrous scaffolds., Procedia Engineering 2013, 53, 689-698. (IF: 0.784)
- Sugandha C, Fathima S. J. H., Yusoff M. M., Characterization of modified cellulose (MC)/ poly (vinyl alcohol) electrospun nanofibers for bone tissue engineering, Procedia Engineering 2013, 53, 683-688. (IF: 0.784)
- Farah H. Z., Sugandha C, Fathima S. J. H., Yusoff M. M., Cross-linking effect on electrospun hydroxyethyl Cellulose/Poly(Vinyl Alcohol) nanofibrous Scaffolds., Malaysian Technical Universities Conference on Engineering and Technology (MUCET) proceedings, 2012, 709-714.
- Fathima S. J. H., Yusoff M. M., Fabricaion and characterization of electrospun silver nanofibers wtih unmatched porosity, IEEE NANO2012 proceedings, 2012, 1448-1451.
- Fathima S. J. H., Yusoff M. M., Synthesis of silver nanoparticles in a green chemistry approach using hydroxyethyl cellulose and its antibacterial activity, Malaysian Technical Universities Conference on Engineering and Technology (MUCET) proceedings, 2011, 885-889.
- Fathima S. J. H., Yusoff M. M., Synthesis of Gold Dendrites in a Green Chemistry Approach Using Hydroxyethyl Cellulose, International Conference on Nanotechnology and Biosensors IPCBEE proceedings, 2011, 59-63.
- Fathima S. J. H., Paul J., Valiyaveettil S., Surface structured gold nanotube mats: Fabrication, characterization and application in surface-enhanced Raman scattering, Small, 2010, 6, 2443-2447. (IF: 10.856)
- Fathima S. J. H., Valiyaveettil S., Snake-shaped gold nanostructures from hydroxyethyl cellulose mediated synthesis, International journal of nanoscience, 2010, 09, 5, 431-437.
- Basheer C., Fathima S. J. H., Lee H. K., Valiyaveettil S., Design of a capillary-microreactor for efficient Suzuki coupling reactions. Tetrahedron Letters 2004, 45, (39), 7297-7300. (IF: 2.379)
- Ravindranath R., Vijila C., Ajikumar P. K., Fathima S. J. H., Ng K. L., Wang H. Z., Jin C. S., Knoll W., Valiyaveettil S., Photophysical properties of hydroxylated

amphiphilic poly(p-phenylene)s. Journal of Physical Chemistry B 2006, 110, (51), 25958-25963. (IF: 2.923)

Exhibitions

- Farah H. Z., Hamid H. A., Ramli A. N. M., Fathima S. J. H., Yusoff M. M., INDUSTRI HydroPlast: An adhesive wound foam, (CITREX2019), Malaysia, 12-13 February 2019.
- Fathima S. J. H., Farah H. Z., Ishak W. M. F., Yusoff M. M., 3D Porous Alginate/Hydroxyethyl cellulose and cockle shell powder Scaffolds for bone tissue engineering, (CITREX2018), Malaysia, 7-8 February 2018.
- Fathima S. J. H., Farah H. Z., Ishak W. M. F., Yusoff M. M., Scaffolds from seaweed/cockle shell powder for bone tissue engineering, (ITEX2017), Kuala Lumpur, Malaysia, 11-13 May 2017.
- Fathima S. J. H., Farah H. Z., Ishak W. M. F., Yusoff M. M., Scaffolds from seaweed/cockle shell powder for bone tissue engineering, (CITREX2017), Malaysia, 15-16 March 2017.
- Fathima S. J. H., Farah H. Z., Ishak W. M. F., Yusoff M. M., Alginate/nanohydroxyapatite scaffolds for bone tissue engineering, (CITREX2017), Malaysia, 15-16 March 2017.
- Fathima S. J. H., Sugandha C, Yusoff M. M., Nano cockle shell/ Hydroxyethyl cellulose porous scaffolds for tissue engineering, Bio Malaysia 2016, 31-May-2 June 2016.
- Fathima S. J. H., Farah H. Z., Yusoff M. M., Nanocockle shell/Hydroxyethyl cellulose porous scaffolds for tissue engineering. (CITREX2016), Malaysia, 7-8 March 2016.
- Hassanali H., C, Fathima S. J. H., Yusoff M. M., Porous hydroxyethyl cellulose/hydroxyapatite composite scaffolds for bone tissue engineering. (CITREX2015), Malaysia, 11-12 March 2015.
- Farah H. Z., Fathima S. J. H., Yusoff M. M., Mohammad Syaiful Bahari A. R., Nano-biomaterial from modified cellulose for skin tissue engineering, Bio Malaysia 2014, 19-21 November 2014.

- Farah H. Z., Fathima S. J. H., Yusoff M. M., Mohammad Syaiful Bahari A. R., Nano-biomaterial from modified cellulose for skin tissue engineering, 2014 (CITREX2014), Malaysia, 5-6 March 2014.
- Sugandha C, Fathima S. J. H., Yusoff M. M., Calcium phosphate coating on electrospun hydroxyethyl cellulose nanofibers for bone tissue engineering, 2014 (CITREX2014), Malaysia, 5-6 March 2014.
- Gurumurthy H., Sasikala A., Yuvaraj A. R., Fathima S. J. H., Yusoff M. M., Environmentally friendly, non-hazardous, cost effective flexible displays for future generation, International innovation, design and articulation (i-IdeA 2013), Malaysia, 28-30 May 2013.
- Fathima S. J. H., Hassanal H., Yusoff M. M., Magnetic metal nanofibers with high specific surface area, Creation, innovation, technology & research exposition 2013 (CITREX2013), Malaysia, 27-28 March 2013.
- Fathima S. J. H., Farah H. Z., Sugandha C, Yusoff M. M., Nanofibrous scaffolds from water soluble polymers for bone growth, Creation, innovation, technology & research exposition 2013 (CITREX2013), Malaysia, 27-28 March 2013.
- Fathima S. J. H., Gurumurthy H., Sasikala A., Yusoff M. M., Photosensitive molecules decorated with biocomposite polymers for improving the stability of photonic devices, Creation, innovation, technology & research exposition 2013 (CITREX2013), Malaysia, 27-28 March 2013.
- Fathima S. J. H., Yusoff M. M., Noble and magnetic nanofibers with high surface area for electronic applications, Malaysia technology expo 2013 (MTE 2013), Malaysia, 21-23 February 2013.
- Fathima S. J. H., Chong K. F., Yusoff M. M., Metal nanofibers with unmatched surface area for electronic applications, Creation, innovation, technology & research exposition 2012 (CITREX2012), Malaysia, 27-28 March 2012.
- Fathima S. J. H., Farah H. Z., Sugandha C, Yusoff M. M., Scaffolds from chemically modified cellulose nanofibers for bone tissue engineering, Creation, innovation, technology & research exposition 2012 (CITREX2012), Malaysia, 27-28 March 2012.

- Fathima S. J. H., Yusoff M. M., Thin films of chemically modified cellulose for antibacterial applications, Creation, innovation, technology & research exposition 2012 (CITREX2012), Malaysia, 27-28 March 2012.
- Fathima S. J. H., Chong K. F., Yusoff M. M., Metal nanofibers with unmatched surface area for electronic applications, 23rd International invention, innovation and technology exhibition (ITEX 2012), Malaysia, 17-19 May 2012.
- Fathima S. J. H., Yusoff M. M., Synthesis of metal nanoparticles using hydroxyethyl cellulose in a green chemistry approach, ez-SciMaT Carnival 2012, Malaysia, 2-4 November 2012.
- Fathima S. J. H., Farah H. Z., Sugandha C, Yusoff M. M., Scaffolds from chemically modified cellulose nanofibers for bone tissue engineering, Bio Malaysia 2012, 5-7 November 2012.
- Fathima S. J. H., Chong K. F., Yusoff M. M., Metal nanofibers with unmatched surface area for electronic applications, Seoul international invention fair 2012 (SIIF), Korea, 29 November-2 December 2012.
- Fathima S. J. H., Yusoff M. M., Free standing gold and silver nanofibers with unprecedented porosity for surface enhanced raman scattering (SERS) and electronic applications, Malaysia technology expo 2011 (MTE 2011), Malaysia, 17-19 February 2011.
- Azhari H. A., Abdurahman H. N., Fathima S. J. H., Yusoff M. M., Formulation of antibacterial preparation, Creation, innovation, technology & research exposition 2011 (CITREX2011), Malaysia, 13-14 April 2011.
- Fathima S. J. H., Farah H. Z., Yusoff M. M., Antibacterial cellulose membrane by green chemistry approach for health care applications, Bio Malaysia 2011, 21-23 November 2011.
- Azhari H. A., Abdurahman H. N., Fathima S. J. H., Yusoff M. M., Antibacterial

formulation from basil, Bio Malaysia 2011, 21-23 November 2011.

Research supervision

- **PhD supervisor**, Farah Hanani Binti Zulkifli, Biomimetic scaffolds from chemically modified cellulose for skin tissue engineering, UMP, 2015, completed.
- **PhD supervisor**, Sugandha Chahal, Electrospun hydroxyethyl cellulose nanofibrous scaffolds functionalized with hydroxyapatite for bone tissue engineering, UMP, 2016, completed.
- **M.Sc supervisor**, Sasikala A/P Appalasuwami, Hydroxyethyl cellulose capped nanoparticles synthesis, characterization and its application, UMP, 2018, completed.
- **M.Sc supervisor**, Hassanal Bin Haris, Biomaterials from hydroxyethyl cellulose sponges coated with hydroxyapatite: Fabrication, Characterization and application, UMP, 2019, completed.
- **M.Sc supervisor**, Etdal Bakhiet, Producing and characterizing scaffolds from alginate/Nano-hydroxyapatite (nHA) using modification techniques, UMP, 2019, ongoing. (till April 2019).
- **M.Sc co-supervisor**, Aesha Muftah Mohamed, Silicon nanostructures produced by high power lasers, UMP, discontinued.
- **UG supervisor**, Nurul Atirah Abdul Razak, Alginate/HEC based scaffolds for bone tissue engineering. UMP, 2018.
- **UG supervisor**, Nurul Hidayah Binti Zahari, Effect of CaCl₂ crosslinking on the porosity of SA/HEC scaffold for Bone Tissue Engineering. UMP, 2018.
- **UG supervisor**, Halilah Binti Mansor, Preparation and characterization of SA/HEC scaffolds (5wt%) cross-linked by Ca²⁺ ions for bone tissue engineering. UMP, 2018.
- **UG supervisor**, Nur Adilla Binti Alias, Fabrication and Characterization of Hydroxyethyl Cellulose and Hydroxyapatite on Alginate/Sponges. UMP, 2017.
- **UG supervisor**, Nor Amirah Binti Che Ibrahim, Fabrication and Characterization of Hydroxyethyl Cellulose (7%) and Cockle Shell powder on Alginate Sponges (HEC 30% Alginate Sponges 70%). UMP, 2017.

- **UG supervisor**, Nur Khaleeda Adibah Binti Mohammad, Fabrication and Characterization of 7% Hydroxyethyl Cellulose (HEC) and Cockle Shell powder on Alginate Sponges (70% HEC 30% Alginate Sponges). UMP, 2017.
- **UG supervisor**, Nurdiyana Binti Mohd Noor, Investigation on the pore size of hydroxyethyl cellulose sponges. UMP, 2016.
- **UG supervisor**, Nadzwin Najjah Binti Haseli, Investigation on the shelf-life of hydroxyethyl cellulose sponges. UMP, 2016.
- **UG supervisor**, Nik Nor Akmal Dalila Bt Azhar, Investigation on the mechanical properties of hydroxyethyl cellulose sponges before cross-linking. UMP, 2016.
- **UG supervisor**, Khairul Anam Bin Ramlan, Investigation on the mechanical properties of hydroxyethyl cellulose sponges after cross-linking. UMP, 2016..
- **UG supervisor**, Siti Hajar Ulya Bt Abdul Razak, Investigation on the mechanical properties of hydroxyethyl cellulose sponges coated with hydroxyl apatite. UMP, 2016.
- **UG supervisor**, Nasuha Binti Mad Naawi, Synthesis and characterization of Silver nanoparticles on hydroxyethyl cellulose sponges. UMP, 2015.
- **UG supervisor**, Ang Pei Xin, Synthesis and characterization of nickel nanoparticles on hydroxyethyl cellulose sponges. UMP, 2015.
- **UG supervisor**, Nor Ainina Binti Rozalli, Synthesis and characterization of gold nanoparticles on hydroxyethyl cellulose sponges., UMP, 2015.
- **UG supervisor**, Rohaziela Binti Rasid, Synthesis and characterization of iron nanoparticles on hydroxyethyl cellulose sponges., UMP, 2015.
- **UG supervisor**, Nurul Hafizah BT Mohamed Aliasrudin, A study on the mineralization of hydroxyapatite on biocompatible polymer in the presence of

histidine, UMP, 2015

- **UG supervisor**, Norshafidha Binti Harun, A study on the mineralization of hydroxyapatite on biocompatible polymer in the presence of phenylalanine, UMP, 2015
- **UG supervisor**, Norazmi Bin Nordin, A study on the mineralization of hydroxyapatite on biocompatible polymer in the presence of glycine, UMP, 2015
- **UG supervisor**, Wan Salisa, Crystallization of calcium carbonate and magnesium carbonate on hydroxyethyl cellulose sponges, UMP, 2015
- **UG supervisor**, Pee Chi Keong, Crystallization of hydroxyapatite on hydroxyethyl cellulose films, UMP, 2015
- **UG supervisor**, Nur Atiqah Binti Zulkifli, A study on the mineralization of hydroxyapatite on biocompatible polymer in the presence of leucine, UMP, 2015
- **UG supervisor**, Nur Fatin Bt Zainuddin, A study on the effect of L-phenylalanine on the crystallization of calcium carbonate on biocompatible polymer, UMP, 2014
- **UG supervisor**, Ddidi Safina Binti AB Rahim, A study on the effect of L-leucine on the crystallization of calcium carbonate on biocompatible polymer, UMP, 2014
- **UG supervisor**, Nur Shazwani Mohd Nazri, A study on the effect of histidine on the crystallization of calcium carbonate on biocompatible polymer, UMP, 2014
- **UG supervisor**, Nur Adila Fatin BT Mohd Khir, A study on the effect of glycine on the crystallization of calcium carbonate on biocompatible polymer, UMP, 2014
- **UG supervisor**, Nurul Aisyah Binti Abdul Rahman, Fabrication and characterization of nickel nanofibers with high surface area, UMP, 2013.
- **UG supervisor**, Azura Binti Derus, Fabrication and characterization of cobalt nanofibers with high surface area, UMP, 2013.
- **UG supervisor**, Nor Fatiha Binti Lahab, Fabrication and characterization of iron

nanofibers with high surface area, UMP, 2013.

- **UG supervisor**, Che Mohd Aizal Bin Che Mohd, Comparative studies of the gold and silver nanoparticles using hydroxyethyl cellulose, UMP, 2013.
- **UG supervisor**, Nurul Atikah Abdul Halim, Thin films of hydroxyethyl cellulose/silver nanoparticles (HEC/AgNP) for antibacterial activity, UMP, 2012.
- **UG supervisor**, Intan Shafinaz Binti Abd Manaf, Poly(vinyl alcohol) (PVA) nanofibers embedded with silver nanoparticlcs for antibacterial studies by electrospinning method, UMP, 2012.
- **UG co-supervisor**, Loh, Synthesis and characterization of metal nanoparticles using aminoacids, NUS.
- **UG co-supervisor**, Radha, Aligned gold nanorods in polymer nanofibers –fabrication and characterization, NUS.
- **UG co-supervisor**, Bay Serene, Fabrication and application of polymer nanofibers as sensors, NUS.
- **High school project co-supervisor**, Hari Narayan A.V, Fabrication of gold nanofibers and its application in SERS, NUS.
- **High school project co-supervisor**, Gabriel, Fabrication of gold nanofibers and its application in SERS, NUS.

Research grants

- **Leader**, PPRN, UIC150710, 2015-2016, Demand-Driven Innovation Project by PPRN, Ozherb Sdn. Bhd, Malaysia, Inquire technology to increase the strength, efficacy and shelf-life of bone scaffold.

- **Member**, FRGS, RDU100106, 2010-2013, Fundamental Study on the Chemical and Mechanical Properties of Electrospun Nanofibrous Scaffolds Based on Hydroxyl Ethyl Cellulose/Hydroxyapatite and Their Potential Application in Bone Tissue Engineering.
- **Leader**, RDU110311, 2011-2014, Free-standing noble metal and alloy nanofibers fabricated using poly (vinyl chloride) nanofibers as sacrificial template – For electronic and medical applications.
- **Leader**, RDU110302, 2011-2013, Biodegradable thin films and electrospun nanofibers of Hydroxyethyl cellulose containing silver nanoparticles for antimicrobial studies.
- **Leader**, RDU1403135, 2014-2016, Fabrication of Porous, Antibacterial Scaffolds Containing Hydroxyethyl Cellulose/Silver nanoparticles for Skin Tissue Engineering.
- **Leader**, GRS130352, 2013-2016, Fabrication of Beta-tricalcium Phosphate Modified Hydroxyethyl Cellulose for Nanofibrous Scaffolds and their Potential Application in bone Tissue Engineering.
- **Leader**, GRS130333, 2013-2016, Fabrication and Characterization of (Hydroxyl-Ethyl Cellulose) 3D Scaffold Treated with Functional peptides and the Evaluation of Cell Proliferation in Bone Tissue Engineering.
- **Leader**, GRS1303107, 2014-2016, Synthesis of biocompatible polymer nanofiber for detection of toxic compounds in the environment.
- **Member**, RDU1703266, 2017-2019, Developing of HEC/PVA fibers with cellulose nanocrystal as a bone tissue engineering scaffold.
- **Member**, RDU160311, 2016-2018, Cellulose nanocrystals incorporated with hydroxypropyl methylcellulose as biocomposite scaffolds for bone tissue engineering.
- **Member**, RDU110378, 2011-2013, Fabrication and characterization of FE1-XNI X magnetic nanofiber alloys by electrospinning method.
- **Member**, RDU110370, 2010-2012, Fabrication of nano titanium aluminide (TIAL) alloys for light weight construction and high temperature applications.
- **Member**, RDU130393, 2013-2015, Characteristic of Engine Oil with Nano Particle as an Additives.

Research grants Applied-for 2016

- **Member**, Science fund-Production of nanocellulose from oil palm empty fruit bunch fiber for wound healing application (UMP0060698).
- **Member**, FRGS, Interaction mechanism of natural hydroxyapatite with polylactic acid in the composites for bone tissue engineering- FRGS 2016-1.

Patents

- Biomimetic Electrospun Hydroxyethyl cellulose/Hydroxyapatite Nanofibrous Scaffolds for Bone Tissue Engineering – Filed.
- Bone tissue engineering using nanofibrous scaffolds of hydroxyethyl cellulose modified with hydroxyapatite and peptides – Filed.
- Method of manufacturing silver nanofibers from polymer solution - Filed.

Books

- Scaffolds from hydroxyethyl cellulose for skin tissue engineering.-2019, Fathima S. J. H., Farah H. Z., Sugandha C, Yusoff M. M., Universiti Malaysia Pahang publishers.
- English grammar for all-2019, Fathima S. J. H., Xavier G. M. J. Universiti Malaysia Pahang publishers.

Faculty Administrative Experience

Community Services

- Member of the National Kidney Foundation, Malaysia.
- Donating every year to Jamiya millia Islamia, old folk nursing home, Singapore.

Consultancy Activities

Selected Consultancy

Local

- Principal researcher, Inquire technology to increase the strength, efficacy and shelf-life of bone scaffold, Demand-Driven Innovation Project by PPRN, Ozherb Sdn. Bhd, Malaysia.
- Examiner, Master Thesis, Nurul Ain Binti Ramli, Nanoparticles catalyzed partial hydrogenation of natural rubbers and their polymer blends, 2012, Faculty of Industrial Sciences & Technology, UMP.
- Oral Examination (Viva Voce) panel member, Irma Nurfitri- Master of Science (Industrial Chemistry), 25 Nov 2014, Faculty of Industrial Sciences & Technology, UMP.

Overseas

- Examiner, PhD Thesis, Ms.I. Rama , Synthesis, characterization, electrochemical studies, catalytic behaviour and *in vitro* biological evaluation and antioxidant activity of some transition metal complexes of Schiff bases derived from N-substituted benzene sulfonamide 2015, Bharathidasan University, India.
- Examiner, PhD Thesis, Ms. Devi, Amperometric detection of biologically important molecules using metal hexacyanoferrate decorated TiO₂ nanotube modified electrode 2015, University Of Madras, India.

Membership in Professional Bodies

- Member of the Singapore National Institute of chemistry, SNIC.
- Member of the American chemical society, ACS.
- Member of the Asia-Pacific Chemical, Biological & Environmental engineering Society (APCBEEES).
- Member of the International NanoScience Community.

Awards and recognitions

Awards

- Farah H. Z., Hamid H. A., Ramli A. N. M., Fathima S. J. H., Yusoff M. M., INDUSTRI HydroPlast: An adhesive wound foam, (CITREX2019), Malaysia, 12-13 February 2019. **BRONZE MEDAL.**

- Fathima S. J. H., Farah H. Z., Ishak W. M. F., Yusoff M. M., 3D Porous Alginate/Hydroxyethyl cellulose and cockle shell powder Scaffolds for bone tissue engineering, (CITREX2018), Malaysia, 7-8 February 2018. **SILVER MEDAL.**
- Fathima S. J. H., Farah H. Z., Ishak W. M. F., Yusoff M. M., Scaffolds from seaweed/cockle shell powder for bone tissue engineering, (ITEX2017), Kuala Lumpur, Malaysia, 11-13 May 2017,, **SILVER MEDAL.**
- Fathima S. J. H., Farah H. Z., Ishak W. M. F., Yusoff M. M., Scaffolds from seaweed/cockle shell powder for bone tissue engineering, (CITREX2017), Malaysia, 15-16 March 2017. **GOLD MEDAL.**
- Fathima S. J. H., Farah H. Z., Ishak W. M. F., Yusoff M. M., Alginate/nanohydroxyapatite scaffolds for bone tissue engineering, (CITREX2017), Malaysia, 15-16 March 2017. **BRONZE MEDAL.**
- Fathima S. J. H., Universiti Malaysia Pahang, Anugerah cendekia bitara 2016, **MERIT AWARD.**
- Fathima S. J. H., Farah H. Z., Yusoff M. M., Nanocockle shell/Hydroxyethyl cellulose porous scaffolds for tissue engineering. (CITREX2016), Malaysia, 7-8 March 2016, **SILVER MEDAL.**
- Farah H. Z., Fathima S. J. H., Yusoff M. M., Mohammad Syaiful Bahari A. R., Nanostructured materials from hydroxyethyl cellulose for skin tissue engineering, Universiti Malaysia Pahang, Anugerah cendekia bitara 2015, **CENDEKIA BITARA AWARD.**
- Hassanal H., C, Fathima S. J. H., Yusoff M. M., Electrospun hydroxyethyl cellulose nanofibers functionalized with calcium phosphate coating for bone tissue engineering, Porous hydroxyethyl cellulose/ hydroxyapatite composite scaffolds for bone tissue engineering. (CITREX2015), Malaysia, 11-12 March 2015, **BRONZE MEDAL.**
- Sugandha C, Fathima S. J. H., Yusoff M. M., Calcium phosphate coating on electrospun hydroxyethyl cellulose nanofibers for bone tissue engineering, 2014 (CITREX2014), Malaysia, 5-6 March 2014, **GOLD MEDAL.**
- Farah H. Z., Fathima S. J. H., Yusoff M. M., Mohammad Syaiful Bahari A. R., Nano-biomaterial from modified cellulose for skin tissue engineering, 2014 (CITREX2014), Malaysia, 5-6 March 2014, **SILVER MEDAL.**

- Sasikala A, Fathima S. J. H., Yusoff M. M., A study on the size effect of HEC capped silver nanoparticles on the antibacterial activity, Conference on Industry-Academia Joint Initiatives in Biotechnology (CIA: Biotech 13), Malaysia, 5-7 December 2013, **BEST POSTER AWARD-second prize.**
- Gurumurthy H., Sasikala A., Yuvaraj A. R., Fathima S. J. H., Yusoff M. M., Environmentally friendly, non-hazardous, cost effective flexible displays for future generation, International innovation, design and articulation (i-IdeA 2013), Malaysia, 28-30 May 2013, **GOLD MEDAL.**
- Fathima S. J. H., Hassanal H., Yusoff M. M., Magnetic metal nanofibers with high specific surface area, Creation, innovation, technology & research exposition 2013 (CITREX2013), Malaysia, 27-28 March 2013, **SILVER MEDAL.**
- Fathima S. J. H., Farah H. Z., Sugandha C, Yusoff M. M., Nanofibrous scaffolds from water soluble polymers for bone growth, Creation, innovation, technology & research exposition 2013 (CITREX2013), Malaysia, 27-28 March 2013, **BRONZE MEDAL.**
- Fathima S. J. H., Gurumurthy H., Sasikala A., Yusoff M. M., Photosensitive molecules decorated with biocomposite polymers for improving the stability of photonic devices, Creation, innovation, technology & research exposition 2013 (CITREX2013), Malaysia, 27-28 March 2013, **BRONZE MEDAL.**
- Fathima S. J. H., Chong K. F., Yusoff M. M., Metal nanofibers with unmatched surface area for electronic applications, Creation, innovation, technology & research exposition 2012 (CITREX2012), Malaysia, 27-28 March 2012, **SILVER MEDAL.**
- Fathima S. J. H., Farah H. Z., Sugandha C, Yusoff M. M., Scaffolds from chemically modified cellulose nanofibers for bone tissue engineering, Creation, innovation, technology & research exposition 2012 (CITREX2012), Malaysia, 27-28 March 2012 **SILVER MEDAL.**
- Fathima S. J. H., Chong K. F., Yusoff M. M., Metal nanofibers with unmatched surface area for electronic applications, 23rd International invention, innovation and technology exhibition (ITEX 2012), Malaysia, 17-19 May 2012, **GOLD MEDAL.**

- Fathima S. J. H., Farah H. Z., Sugandha C, Yusoff M. M., Scaffolds from chemically modified cellulose nanofibers for bone tissue engineering, Bio Malaysia 2012, 5-7 November 2012, **BRONZE MEDAL**.
- Fathima S. J. H., Chong K. F., Yusoff M. M., Metal nanofibers with unmatched surface area for electronic applications, Seoul international invention fair 2012 (SIIF), Korea, 29 November-2 December 2012, **GOLD MEDAL**.
- Sugandha C, Farah H. Z., Fathima S. J. H., Yusoff M. M., Characterization of HEC/PVA blend nanofibers produced by electrospinning, National conference for post graduate research 2012 (NCON 2012), Malaysia, 8-9 September 2012, **THIRD BEST POSTER**.
- Sugandha C, Fathima S. J. H., Yusoff M. M., Characterization of modified cellulose (MC)/ poly (vinyl alcohol) electrospun nanofibers for bone tissue engineering, Malaysian Technical Universities Conference on Engineering and Technology (MUCET) 2012, Malaysia, 20-21 November 2012., **SECOND BEST PAPER AWARD and SILVER MEDAL**.
- Fathima S. J. H., Scaffolds from chemically modified cellulose nanofibers for bone tissue engineering Universiti Malaysia Pahang, Anugerah cendekia bitara 2012, **MERIT AWARD**.
- Fathima S. J. H., Metal nanofibers with unmatched surface area for electronic applications, Universiti Malaysia Pahang, Anugerah cendekia bitara 2012, **CENDEKIA BITARA AWARD**.
- Fathima S. J. H., Yusoff M. M., Free standing gold and silver nanofibers with unprecedented porosity for surface enhanced raman scattering (SERS) and electronic applications, Malaysia technology expo 2011 (MTE 2011), Malaysia, 17-19 February 2011, **BRONZE MEDAL**.
- Azhari H. A., Abdurahman H. N., Fathima S. J. H., Yusoff M. M., Formulation of antibacterial preparation, Creation, innovation, technology & research exposition 2011 (CITREX2011), Malaysia, 13-14 April 2011, **SILVER MEDAL**.

- Fathima S. J. H., Yusoff M. M., Synthesis of gold dendrites in a green chemistry approach using hydroxyethyl cellulose, 2nd International Conference on Nanotechnology and Biosensors (ICNB 2011), 28-30 December 2011, **EXCELLENT PAPER.**
- Fathima S. J. H., Free standing gold and silver nanofibers with unprecedented porosity for surface enhanced raman scattering (SERS) and electronic applications, Universiti Malaysia Pahang, Anugerah cendekia bitara 2011, **MERIT AWARD.**