

IIS SOPYAN



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المؤهل العلمي

- Doctor of Engineering in Applied Chemistry
- Master of Engineering in Industrial and Engineering Chemistry
- Bachelor of Technology in Industrial and Engineering Chemistry

مسؤوليات التدريس

ADVANCED MATERIALS SCIENCE	2010/2011
ADVANCED POLYMER SYNTHESIS AND PROCESSING	2020/2021
APPLIED POLYMER PROCESSING	2004/2005 2005/2006 2006/2007 2007/2008
BIOCERAMICS	2007/2008 2008/2009 2012/2013 2014/2015 2015/2016 2017/2018
BIOMATERIALS	2008/2009 2009/2010 2010/2011 2011/2012 2012/2013 2013/2014 2014/2015 2015/2016 2016/2017 2017/2018 2018/2019 2020/2021
Biomaterials	2019/2020
CERAMIC AND BIOMEDICAL MATERIALS	2006/2007 2007/2008 2008/2009 2009/2010
DIFFERENTIAL EQUATIONS AND LINEAR ALGEBRA	2005/2006
HIGH PERFORMANCE POLYMERIC MATERIALS	2019/2020
INTEGRATED DESIGN PROJECT	2016/2017
MATERIALS ENGINEERING LAB III	2007/2008 2010/2011
MATERIALS ENGINEERING LAB IV	2017/2018 2018/2019 2019/2020
MATERIALS ENGINEERING LAB V	2010/2011
MATERIALS LABORATORY I	2008/2009 2010/2011
MATERIALS PROCESS DESIGN	2004/2005 2005/2006 2006/2007 2007/2008 2008/2009
MATERIALS SELECTION AND DESIGN	2008/2009

Materials Engineering Lab 4	2017/2018
POLYMER PHYSICS	2006/2007 2008/2009
POLYMER PROCESSING	2009/2010
POLYMERIC MATERIALS	2004/2005 2005/2006 2006/2007 2007/2008 2008/2009 2009/2010 2010/2011 2011/2012 2012/2013 2013/2014 2014/2015 2015/2016 2016/2017 2017/2018 2018/2019
POLYMERS	2017/2018 2018/2019 2019/2020 2020/2021
PROJECT I	2007/2008
Polymer Physics	2018/2019
SOL-GEL TECHNOLOGY AND SYNTHESIS OF MATERIALS	2008/2009 2010/2011
THERMODYNAMICS OF MATERIALS	2005/2006 2006/2007 2007/2008

المشاريع البحثية

In Progress

2019 - Present Surface Passivation of Porous NiTi Shape Memory Alloy via Thermal Oxidation for Bone Implant Application

2019 - Present Surface Passivation of Porous NiTi Shape Memory Alloy via Thermal Oxidation for Bone Implant Application

Completed

2015 - 2019 Straightforward Synthesis of Injectable Calcium Phosphate Cement Through Novel Hydrothermal Technique for Bone Filling Materials

2011 - 2015 Upscaling of Gelatin Coated Microcarrier Beads Fabrication by Using Ultraviolet/Ozone (UVO) system

2011 - 2011 Development of porous alumina-hydroxyapatite composite for biomedical applications using protein foaming-consolidation method

2011 - 2013 Bioactive Ceramic Matrix Nanocomposites for High Performance Load Bearing Bone Substitute

2011 - 2013 RU 2011: Development of Zinc-doped Hydroxyapatite Porous Bodies for Bone Implant Application

2011 - 2014 Low Temperature Hydrothermal Derived Calcium Phosphate Bioceramics for Bone-Filing Cement Materials

2009 - 2011 Properties and Characterization of Irradiated END/CNTs Nanocomposites with Different Crosslinker

- 2009 - 2010** Development of Porous Alumina for Biomedical Application using Protein Foaming-Consolidation Method
- 2009 - 2012** The Study of Superabsorbent Biodegradable Hydrogels Developed from Natural Polymer for Sanitary Products
- 2009 - 2010** Dense Calcium Phosphate Via a Compact Green Sample from Hydrothermal Derived Calcium Phosphate Paste
- 2008 - 2011** Development of Highly Active Thin Film TiO₂ Photocatalyst for Air Purification.
- 2008 - 2011** Development of porous Tricalcium Phosphate (TCP) by Using Egg Yolk as pore Creating Agent
- 2007 - 2010** Development of Bioactive Ceramic Coating of Titanium Alloys for Artificial Bone Grafts
- 2006 - 2009** Development of Environmental Friendly Super Bioadhesive For Structural Applications Using Egg Albumin As The Matrix Material
- 2006 - 2011** Low Temperature Oxygen Ion Conductors for Use in Solid Oxide Fuel Cells
- 2006 - 2009** Development of Highly Active Supported TiO₂ Photocatalysts for Industrial Waste Water Purification
- 2006 - 2009** Development Of Bioactive Porous Ceramic Microcarriers For Animal Cell Proliferation
- 2006 - 2008** Development of Cement-Bonded TiO₂ Photocatalysts for Industrial Waste Water Purification
- 2005 - 2008** Improving The Illumination Property of MgO-Protective-Layer For Alternating Current Plasma Display Panels (PDP)
- 2005 - 2008** Development of Porous Biomaterials for Bone Substitutes via Polymeric Sponge Method

المنشورات

Article

- 2019** [Calcium phosphate /poly \(ethylene glycol\) bone cement: cell culture performance.](#) International Journal of Recent Technology and Engineering , 7 (6) pp.82-86
- 2018** [Comparison between microwave and conventional sintering on the properties and microstructural evolution of tetragonal zirconia.](#) Ceramics International , 44 (8) pp.8922-8927
- 2018** [Preparation, scratch adhesion and anti-corrosion performance of TiO₂-MgO-BHA coating on Ti6Al4V implant by plasma electrolytic oxidation technique.](#) Journal of Adhesion Science and Technology , 32 (1) pp.91-102
- 2018** [Incorporation of poly\(Vinyl alcohol\) for the improved properties of hydrothermal derived calcium phosphate cements.](#) Indonesian Journal of Chemistry , 18 (2) pp.354-361

- 2018** [The properties of hydroxyapatite ceramic coatings produced by plasma electrolytic oxidation.](#) Ceramics International , 44 (2) pp.1802-1811
- 2018** [Carbon nanotubes grown on oil palm shell powdered activated carbon as less hazardous and cheap substrate.](#) Applied Nanoscience (Switzerland) , 8 (7) pp.1767-1779
- 2018** [Effect of poly\(ethylene glycol\) on the injectability, setting behavior and mechanical properties of calcium phosphate bone cement.](#) IIUM Engineering Journal , 19 (2) pp.192-202
- 2017** [Different oxidation treatments on polystyrene \(PS\) microspheres by using an ultraviolet/ozone \(UVO3\) system.](#) Proceedings of the Pakistan Academy of Sciences: B. Life and Environmental Sciences , 54 (1B) pp.55-59
- 2017** [Recent development of calcium phosphate based coating on titanium alloy implants.](#) Surface Engineering and Applied Electrochemistry , 53 (5) pp.419-433
- 2017** [Statistical optimization of gelatin immobilization on modified surface PCL microcarrier to improve PCL microcarrier compatibility.](#) Jurnal Teknologi , 79 (6) pp.167-175
- 2017** [Statistical optimization of gelatin immobilisation on modified surface of PCL microcarrier to improve its compatibility.](#) Jurnal Teknologi , 79 (6) pp.167-175
- 2017** [Different oxidation treatments on polystyrene \(PS\) microspheres by using an ultraviolet/ozone \(UVO3\) system.](#) Proceedings of Pakistan Academy of Sciences: B. Life and Environmental Sciences , 54 (B) (1) pp.59-64
- 2017** [Physicochemical characteristics of magnesium hydroxyapatite \(MgHA\) derived via wet precipitation method.](#) Journal of Mechanical Engineering , SI 4 (5) pp.209-216
- 2017** [Calcium phosphate cement for bone filler applications.](#) Journal of Advanced Research in Materials Science , 39 (1) pp.20-31
- 2017** [Influence of sodium on the properties of sol-gel derived hydroxyapatite powder and porous scaffolds.](#) Ceramics International , 43 (15) pp.12263-12269
- 2017** [Optimization of ultraviolet ozone treatment process for improvement of polycaprolactone \(PCL\) microcarrier performance.](#) Cytotechnology , 69 (4) pp.601-616
- 2017** [Statistical optimization of gelatin immobilisation on modified surface PCL microcarrier to improve PCL microcarrier compatibility.](#) Jurnal Teknologi , 79 (6) pp.167-175
- 2017** [Different oxidation treatments on polystyrene \(PS\) microspheres by using an ultraviolet/ozone \(UVO3\) system.](#) Proceedings of Pakistan Academy of Sciences , 54 (1B) pp.59-65
- 2016** [Properties of magnesium doped nanocrystalline hydroxyapatite synthesized by mechanochemical method.](#) ARPN Journal of Engineering and Applied Sciences , 11 (24) pp.14097-14100
- 2016** [Fabrication and sintering behavior of zinc-doped biphasic calcium phosphate bioceramics.](#) Materials and Manufacturing Processes , 31 (6) pp.713-718

- 2016** [Recent developments on injectable calcium phosphate bone cement.](#) Recent Patents on Materials Science , 9 (2) pp.72-94
- 2015** [Synthesis and characterization of nanocrystalline hydroxyapatite powder.](#) Advanced Materials Research , 1087 pp.142-146
- 2015** [Magnesium doped hydroxyapatite through mechanochemical synthesis.](#) Advanced Materials Research , 1087 pp.329-333
- 2015** [Thermal analysis on dehydroxylation of sol-gel derived zinc doped calcium phosphate powders.](#) Advanced Materials Research , 1115 pp.353-356
- 2015** [Sol-gel derived zinc doped calcium phosphate bioceramics prepared via different sintering strategies.](#) Advanced Materials Research , 1115 pp.341-344
- 2015** [Cement bonded sol-gel TiO₂ powder photocatalysis for phenol removal.](#) Applied Mechanics and Materials , 776 pp.271-276
- 2015** [Bone implant materials from eegshell waste.](#) Applied Mechanics and Materials , 776 pp.282-288
- 2015** [Hydroxyapatite layer formation on titanium alloys surface using micro-arc oxidation.](#) ARPN Journal of Engineering and Applied Sciences , 10 (21) pp.10101-10108
- 2015** [Fabrication and characterization of poly \(ethylene oxide\) for photo-electronic devices.](#) ARPN Journal of Engineering and Applied Sciences , 10 (22) pp.17239-17241
- 2015** [Ultraviolet/ozone treated polystyrene microcarriers for animal cell culture.](#) Journal of Chemical Technology and Biotechnology
- 2015** [Hydrophobic organosilica coating on steel and aluminium.](#) ARPN Journal of Engineering and Applied Sciences , 10 (22) pp.17252-17255
- 2014** [Synthesis and properties of biphasic calcium phosphate prepared by different methods.](#) Advanced Materials Research , 970 pp.20-25
- 2014** [Investigations of the effects of initial Zn concentration and sintering conditions on the phase behavior and mechanical properties of Zn-doped bcp.](#) Advances in Environmental Biology , 8 (3(Spe)) pp.680-685
- 2014** [Preparation of zinc doped-biphasic calcium phosphate/carbon nanotube composites.](#) Advances in Environmental Biology , 8 (3(Spe)) pp.787-791
- 2014** [Conversion of strontium hydroxyapatite nanopowders to porous scaffolds for bone implant application.](#) Applied Mechanics and Materials , 607 pp.3-6
- 2014** [Kinetics of cadmium adsorption by CNTs grown on PACs.](#) International Journal of Nanoelectronics and Materials , 7 (1) pp.25-33
- 2014** [Zinc-doped biphasic calcium phosphate nanopowders synthesized via sol-gel method.](#) Indian Journal of Chemistry - Section A Inorganic, Physical, Theoretical and Analytical Chemistry , 53A (5) pp.152-158
- 2014** [Sol-gel synthesis of Zn doped HA powders and their conversion to porous bodies.](#) Applied Mechanics and Materials , 493 pp.603-608

- 2014** [The effects of excess calcium and aging media on mechanical properties of calcium phosphate filling materials.](#) Advanced Materials Research , 911 pp.195-199
- 2013** [Natural photosensitizers for dye sensitized solar cells.](#) International Journal of Renewable Energy Research (IJRER) , 3 (1) pp.138-143
- 2013** [Development of porous calcium phosphate bioceramics for bone implant applications: a review.](#) Recent Patents on Materials Science , 6 pp.238-252
- 2013** [Photocatalytic decomposition of acetaldehyde gas on TiO₂-SiO₂ thin film photocatalyst — a kinetic analysis.](#) Indian Journal of Chemical Technology , 20 (2) pp.137-144
- 2013** [Mechanochemical synthesis of sodium doped hydroxyapatite powder.](#) Indian Journal of Chemistry - Section A Inorganic, Physical, Theoretical and Analytical Chemistry , 52A pp.739-743
- 2013** [Development of triphasic calcium phosphate-carbon nanotubes \(HA/TCP-CNT\) composite: a preliminary study.](#) Key Engineering Materials , 531-32 pp.258-261
- 2013** [Protein foaming-consolidation method for fabrication of high performance porous bioceramics.](#) Advanced Materials Research , 622-23 pp.1759-1763
- 2012** [Mechanochemical synthesis of hydroxyapatite nanopowder: Effects of rotation speed and milling time on powder properties.](#) Applied Mechanics and Materials , 110-16 pp.3639-3644
- 2012** [The effects of calcium excess, water amount and mixing time on the injectability of calcium phosphate filling materials.](#) Applied Mechanics and Materials , 110-16 pp.8-12
- 2012** [Porous alumina from protein foaming-consolidation method containing hydrothermal derived hydroxyapatite powder.](#) Applied Mechanics and Materials , 117-19 pp.782-785
- 2012** [Irradiation modification of epoxidized natural rubber/ethylene vinyl acetate/carbon nanotubes nanocomposites.](#) Advanced Materials Research , 364 pp.427-433
- 2012** [Effects of forming parameters and sintering schedules to the mechanical properties and microstructures of final components.](#) Materials and Design , 33 pp.153-157
- 2012** [Floating porous alumina from protein foaming-consolidation technique for cell culture application.](#) Ceramics International , 38 pp.5287-5291
- 2012** [Sintering behaviour of hydroxyapatite prepared from different routes.](#) Materials and Design , 34 pp.148-154
- 2012** [Fabrication of porous ceramic scaffolds via polymeric sponge method using sol-gel derived strontium doped hydroxyapatite.](#) Applied Mechanics and Materials , 117-19 pp.829-832
- 2012** [Preparation of Dense Biphasic Calcium Phosphate Ceramics using Eggshell Derived Nanopowders.](#) Applied Mechanics and Materials , 110-16 pp.3645-3649

- 2012** [Sintering behavior of hydroxyapatite prepared from different routes.](#) Materials and Design , 34 pp.148-154
- 2012** [Effect of hydroxyapatite and tricalcium phosphate addition on protein foaming-consolidation porous alumina.](#) Journal of Porous Materials , 19 (5) pp.733-743
- 2012** [Porous alumina-hydroxyapatite composites through protein foaming-consolidation method.](#) Journal of the Mechanical Behavior of Biomedical Materials , 8 pp.86-98
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- 2011** [Effect of nano silica on the sinterability of hydroxyapatite dense bodies.](#) Advanced Materials Research , 263/4-5 pp.1832-1838
- 2011** [Synthesis of high fracture toughness of hydroxyapatite bioceramics.](#) Advanced Materials Research , 264/5 pp.1849-1855
- 2011** [Fabrication of ceramic membrane chromatography for biologics purification.](#) IIUM Engineering Journal , 12 (4) pp.115-124
- 2011** [Synthesis of hydroxyapatite through dry mechanical method and its conversion to dense bodies: preliminary result.](#) IFMBE proceedings , 35 pp.97-101
- 2011** [Effects of bismuth oxide on the properties of calcium phosphate bioceramics.](#) Advanced Materials Research , 264/5 pp.1839-1848
- 2011** [Thermal analysis on hydroxyapatite synthesis through mechanochemical method .](#) IFMBE proceedings , 35 pp.108-111
- 2011** [Effect of fiber length variations on mechanical and physical properties of coir fiber reinforced cement-albumen composites \(CFRCC\).](#) IIUM Engineering Journal , 12 (1) pp.63-75
- 2011** [Egg Yolk as pore creating agent to produce porous tri-calcium phosphate for bone implant application.](#) Advanced Materials Research , 265 pp.760-764
- 2011** [Recent progress on hydroxyapatite-based dense biomaterials for load bearing bone substitutes .](#) Recent Patents on Materials Science , 4 pp.63-80
- 2011** [Sintering and properties of dense manganese-doped calcium phosphate bioceramics prepared using sol-gel derived nanopowders.](#) Materials and Manufacturing Processes , 26 pp.908-914
- 2011** [Effects of bismuth oxide on the sinterability of hydroxyapatite.](#) Ceramics International , 37 (2) pp.599-606
- 2011** [Stability and thermal conductivity enhancement of Carbon nanotube \(CNT\) nanofluid using gum Arabic .](#) Journal of Experimental Nanoscience , 6 (6) pp.567-579
- 2011** [Effects of manganese doping on the dielectric properties of titanium dioxide ceramics .](#) Ceramics International , 37 (8) pp.3703-3715

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- 2011** [Sodium-doped hydroxyapatite nanopowder through sol-gel method: synthesis and characterization.](#) Materials Science Forum , 694 pp.128-132
- 2011** [Pressureless sintering of electro-conductive zirconia composites.](#) Materials Science Forum , 694 pp.304-308
- 2011** [Dependence of the fracture toughness on the sintering time of dense hydroxyapatite bioceramics.](#) Materials Science Forum , 694 pp.391-395
- 2011** [Porous alumina through protein foaming-consolidation method: effect of dispersant concentration on the physical properties.](#) Asia-Pacific Journal of Chemical Engineering , 6 pp.863-869
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- 2011** [Sintering of hydroxyapatite ceramic produced by wet chemical method.](#) Advanced Materials Research , 264/65 pp.1856-1861
- 2011** [Synthesis of TiO₂ nanosized powder photocatalyst via sol-gel method for bacteria inactivation application.](#) Malaysian Journal of Microscopy , 7 pp.161-169
- 2011** [Effect of hydroxyapatite and tricalcium phosphate addition on protein foaming-consolidation porous alumina.](#) Journal of Porous Materials
- 2011** [Synthesis of TiO₂ Nanosized Powder Photocatalyst Via Solgel Method for Bacteria Inactivation Application.](#) Malaysian Journal of Microscopy , 7 pp.161-169
- 2011** [Surface modification of polystyrene beads by UV/Ozone treatment.](#) Advanced Materials Research , 264 pp.1532-1537
- 2011** [Immobilization of TiO₂ with cement: photocatalytic degradation of phenol and its kinetic studies .](#) Indian Journal of Chemical Technology , 18 (4) pp.263-270
- 2011** [Synthesis of various carbon nanomaterials \(CNMs\) on powdered activated carbon.](#) African Journal of Biotechnology , 10 (81) pp.18892-18905
- 2010** [Fabrication and characterization of strontium-doped hydroxyapatite bioceramics scaffolds for bone implant application: a preliminary study.](#) Advanced Materials Research , 93-94 pp.401-404
- 2010** [The growth study of vero cells in different type of microcarrier.](#) Materials Sciences and Applications , 1 (5) pp.261-266
- 2010** [Application of low cost polyurethane \(PU\) foam for fabricating porous tri-calcium phosphate \(TCP\).](#) Journal of Biomimetics, Biomaterials and Tissue Engineering , 8 pp.1-7
- 2010** [Dense manganese doped biphasic calcium phosphate for load bearing bone implants.](#) Advanced Materials Research , 93-94 pp.393-396
- 2010** [Manganese doping on biphasic calcium phosphate ceramics for mechanical improvement.](#) Medical Journal of Malaysia , 65 pp.14-16

- 2010** [Phase behaviour of manganese-doped biphasic calcium phosphate ceramics synthesized via sol-gel method.](#) Asia-Pacific Journal of Chemical Engineering
- 2010** [Adhesion failure behavior of sputtered calcium phosphate thin film coatings evaluated using microscratch testing.](#) Journal of the Mechanical Behavior of Biomedical Materials , 3 pp.324-330
- 2010** [Concentration effect of aqueous synthesis on biphasic hydroxyapatite - \$\beta\$ -tricalcium phosphate composition.](#) Advanced Materials Research , 93-94 pp.405-408
- 2009** [Nanosized TiO₂ photocatalyst powder via sol-gel method: effect of hydrolysis degree on powder properties.](#) International Journal of Photoenergy , 2009 pp.1-8
- 2009** [Synthetic bone as a solution for halal bone grafts implantation: demand for bone graft has been increasing steadily.](#) Halal Pages 2009/2010 pp.64-69
- 2009** [Effect of the processing parameters on the integrity of calcium phosphate coatings produced by RF-magnetron sputtering.](#) International Journal of Modern Physics B , 23 (31) pp.5811-5818
- 2009** [Preparation of nano-structured manganese doped-biphasic calcium phosphate powders via sol-gel method.](#) IONICS (Spinger) , 15 pp.735-741
- 2009** [Preparation and characterization of porous hydroxyapatite through polymeric sponge method.](#) Ceramics International , 35 (8) pp.3161-3168
- 2009** [Synthesis of TiO₂-SiO₂ powder photocatalyst via sol-gel method: effect of titanium precursor type on powder properties.](#) Journal of the Institution of Engineers, Malaysia , 70 (4) pp.34-40
- 2009** [TiO₂ powder photocatalyst from sol-gel route and its immobilisation with cement for photocatalytic phenol removal.](#) Journal of the Institution of Engineers, Malaysia , 70 (4) pp.49-56
- 2009** [Synthesis SiO₂-TiO₂ powder and thin film photocatalyst through sol-gel.](#) Indian journal chemistry A , 48 (7) pp.951-957
- 2009** [Preparation of porous alumina for biomedical applications through protein foaming-consolidation method.](#) Materials Research Innovations , 13 (3) pp.327-329
- 2009** [Low temperature hydrothermal synthesis of calcium phosphate ceramics: effect of excess Ca precursor on phase behavior.](#) Indian Journal Chemistry A , 48A pp.1492-1500
- 2009** [Recent progress and development of TiO₂ thin film photocatalysts for pollutant removal.](#) Recent patents on materials science , 2 (2) pp.88-111
- 2009** [Strontium-doped hydroxyapatite nanopowder via sol-gel method : effect of strontium concentration and calcination temperature on phase behavior.](#) Trends in Biomaterials and Artificial Organs , 23 (2) pp.105-113
- 2009** [Preparation of nanostructured manganese-doped biphasic calcium phosphate powders via sol-gel method.](#) Ionics , 15 (6) pp.735-741

- 2008 [Synthesis of nano sized hydroxyapatite powder using sol-gel technique and its conversion to dense and porous bodies.](#) Indian Journal of Chemistry - Section A Inorganic, Physical, Theoretical and Analytical Chemistry , 47 (11) pp.1626-1631
- 2008 [Cell attachment study of chicken fibroblast cell\(DF-1\) using ceramic microcarrier granule in bioreactors.](#) The Medical Journal of Malaysia , 63 (Sup A) pp.18-20
- 2008 [Synthesis and characterization of magnesium doped biphasic calcium phosphate.](#) The Medical Journal of Malaysia , 63 (Sup A) pp.83-84
- 2008 [Influence of Manganese Doping into HA Powders on the properties of its Dense Bodies.](#) The Medical Journal of Malaysia , 63 (Sup A) pp.85-86
- 2008 [Fracture behavior of natural fiber reinforced biopolymer matrix composite.](#) Advanced Materials Research , 47 pp.1189-1192
- 2007 [Porous hydroxyapatite for artificial bone applications.](#) Science and Technology of Advanced Materials , 8 (1-2) pp.116-123

Conference or Workshop Item

- 2019 [Miscibility, morphology and mechanical properties of compatibilized polylactic acid/thermoplastic polyurethane blends.](#) In: **6th International Conference on Recent Advances in Materials, Minerals and Environment, RAMM 2018**
- 2018 [Effects of sintering time and temperature to the characteristics of FeCrAl powder compacts formed at elevated temperature.](#) In: **"International Conference on Advances in Manufacturing and Materials Engineering 2017, ICAMME 2017"**
- 2018 [The effects of excess calcium on the handling and mechanical properties of hydrothermal derived calcium phosphate bone cement.](#) In: **International Conference on Advances in Manufacturing and Materials Engineering 2017 (ICAMME17)**
- 2018 [Antiwashout behavior of calcium phosphate cement incorporated with poly\(ethylene glycol\).](#) In: **International Conference on Advances in Manufacturing and Materials Engineering 2017 (ICAMME17)**
- 2018 [Effects of forming temperature and sintering rate to the final properties of FeCuAl powder compacts formed through uniaxial die compaction process.](#) In: **International Conference on Advances in Manufacturing and Materials Engineering 2017 (ICAMME17)**
- 2018 [Effects of sintering schedule to the characteristics of FeCrAl powder compacts formed at elevated temperature.](#) In: **International Conference on Advances in Manufacturing and Materials Engineering 2017 (ICAMME17)**
- 2018 [Electrospun Poly \(Vinyl Alcohol\) \(PVA\) fiber mats as carriers for extract from agarwood branch.](#) In: **International Conference on Halal Innovation in Products and Services 2018 (i-CHIPS 2018)**
- 2018 [Surface modification of polycaprolactone \(PCL\) microcarrier for performance improvement of human skin fibroblast cell culture.](#) In: **International Conference on Advances in Manufacturing and Materials Engineering 2017 (ICAMME17)**

- 2017 [Effect of Poly\(Vinyl Alcohol\) addition on the properties of hydrothermal derived calcium phosphate cement for bone filling materials.](#) In: **2nd International Conference on Materials Engineering and Nanotechnology (ICMEN2017)**
- 2017 [Characteristic features of plasma electrolytic treated layers in Na₃PO₄ solution.](#) In: **Advances in Material & Processing Technologies Conference 2017 (AMPT 2016)**
- 2017 [Novel injectable calcium phosphate bone cement from wet chemical precipitation method.](#) In: **2nd International Conference on Materials Engineering and Nanotechnology, ICMEN 2017**
- 2016 [Statistical optimization of gelatin immobilization to improve PCL microcarrier surface.](#) In: **4th International Conference on Biotechnology Engineering 2016 (ICBioE 2016)**
- 2016 [Vero cell culture on magnesium doped biphasic calcium phosphate scaffolds.](#) In: **4th International Conference on Biotechnology Engineering 2016 (ICBioE 2016)**
- 2015 [Modification of Polycaprolactone microspheres surface by ultra violet/ozone treatment to improve its hydrophilicity.](#) In: **1st UMM International Conference on Pure and Applied Research (UMM-ICoPAR)**
- 2015 [Fabrication and characterization of poly \(ethylene oxide\) for photo-electronic devices.](#) In: **International Postgraduate Conference on Engineering Research (IPCER) 2015**
- 2014 [Sol-gel derived zinc doped calcium phosphate bioceramics prepared via different sintering strategies .](#) In: **International Conference on Advances in Manufacturing and Materials Engineering (ICAMME2014)**
- 2013 [Preparation and characterization of polycaprolactone \(PCL\) microspheres for cell culture applications.](#) In: **3rd International Conference on Biotechnology (ICBioE'13)**
- 2013 [Studies on the process condition that affect the size of polystyrene microcarrier by an emulsion solvent evaporation process.](#) In: **3rd International Conference on Biotechnology Engineering (ICBioE 2013)**
- 2013 [Natural photosensitizers for dye sensitized solar cells.](#) In: **European conference and workshop on Renewable Energy Systems (EWRES)**
- 2013 [Development of polystyrene microcarrier by an emulsion solvent evaporation process.](#) In: **IIUM Research, Invention and Innovation Exhibition (IRIIE) 2013**
- 2013 [Fabrication of gelatin coated polycaprolactone \(PCL\) microspheres for cell culture application.](#) In: **IIUM Research, Invention and Innovation Exhibition (IRIIE) 2013**
- 2012 [Characterization of forsterite bioceramics.](#) In: **International Conference on Advances in Manufacturing and Materials Engineering, ICAMME 2012**
- 2012 [Mechanical and electrical properties of Y-TZP/ZrB₂ composite.](#) In: **International Conference on Advances in Manufacturing and Materials Engineering, ICAMME 2012**

- 2012 [Kinetics of cadmium adsorption by CNTs grown on PACs.](#) In: **International Conference on Nanotechnology, ICONT 2012**
- 2011 [Various Carbon Nanomaterials \(CNMs\) synthesized on powdered activated carbon by CVD reactor.](#) In: **2nd International Conference on Biotechnology Engineering (ICBioE 2011)**
- 2011 [Fabrication of porous ceramic scaffolds via polymeric sponge method using sol-gel derived strontium doped hydroxyapatite powder.](#) In: **5th Kuala Lumpur International Conference on Biomedical Engineering, BIOMED 2011**
- 2010 [Optimization of synthesis of carbon nanotubes on iron impregnated activated carbon.](#) In: **24th Symposium of Malaysian Chemical Engineers (SOMChE 2010) and 1st International Conference on Process Engineering and Advanced Materials 2010 (ICPEAM2010).**
- 2010 [Lightweight biodegradable cotton/albumen board \(CAB\) for sustainable environment.](#) In: **IUM Research, Innovation & Invention Exhibition (IRIIE 2010)**
- 2010 [Synthesis of TiO₂ nanosized powder photocatalyst via soft-gel method for bacteria inactivation application.](#) In: **19th Scientific Conference of Electron Microscopy Society of Malaysia (EMSM)**
- 2010 [Floating porous ceramics for high density cell culture in stirred bioreactors.](#) In: **IUM Research, Innovation & Invention Exhibition (IRIIE 2010)**
- 2009 [Artificial bone as an alternative solution for halal bone implants.](#) In: **World Halal Research Summit 2009**
- 2009 [Fabrication of ceramic membrane chromatography for biologics purification.](#) In: **Advanced materials and Processing Technologies**
- 2009 [Fabrication system for surface modification of polystyrene beads by UV/Ozone treatment and its characterization.](#) In: **Advances in Materials and Processing Technologies**
- 2009 [Sintering behavior of hydroxyapatite ceramics prepared by different routes .](#) In: **33rd International Conference & Exposition on Advanced Ceramics and Composites 2009**
- 2008 [Development of magnesium-doped biphasic calcium phosphate through sol-gel method.](#) In: **4th Kuala Lumpur International Conference on Biomedical Engineering 2008**

Book

- 2011 [Recent development of microcarrier for cell culture engineering .](#) IUM Press, International Islamic University Malaysia . ISBN 9789674180096

Book Section

- 2011 [Synthesis and characterization of sol-gel method derived zinc doped hydroxyapatite powder.](#) In: **Advances in composite materials** IUM Press . ISBN 9789674182311 , pp.161-166
- 2011 [Effect of dispersant on protein foaming-consolidation porous alumina containing hydrothermal derived hydroxyapatite nanopowder.](#) In: **Advances in materials engineering** IUM Press . ISBN 9789674181673 , pp.103-108

- 2011 [Effect of yolk addition on protein foaming-consolidation porous alumina-calcium phosphate composite.](#) In: **Advances in materials engineering** IIUM Press . ISBN 9789674181673 , pp.109-114
- 2011 [Investigation of the effect of starch addition on protein foaming-consolidation porous alumina containing hydroxyapatite nanopowder.](#) In: **Advances in materials engineering** IIUM Press . ISBN 9789674181673 , pp.115-119
- 2011 [The influence of hydroxyapatite loading on protein foaming-consolidation porous alumina sintered at 1300°C .](#) In: **Advances in materials engineering** IIUM Press . ISBN 9789674181673 , pp.120-125
- 2011 [Porous alumina-hydroxyapatite composites via protein foaming-consolidation method: effect of HA loading on physical properties .](#) In: **Advances in materials engineering** IIUM Press . ISBN 9789674181673 , pp.132-136
- 2011 [Effect of milling time on mechanochemically synthesized nanohydroxyapatite bioceramics.](#) In: **Advances in materials engineering** IIUM Press . ISBN 9789674181673 , pp.149-154
- 2011 [Morphological analysis of mechanochemically synthesized nanohydroxyapatite bioceramics.](#) In: **Advances in materials engineering** IIUM Press . ISBN 9789674181673 , pp.155-159
- 2011 [Sodium doped nanohydroxyapatite bioceramics through mechanochemical synthesis.](#) In: **Advances in materials engineering** IIUM Press . ISBN 9789674181673 , pp.160-164
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