

ISKANDAR IDRIS BIN YAACOB



- KULLIYAH OF ENGINEERING
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المؤهل العلمي

- Doctor of Philosophy in Chemical Engineering
- Master of Science in Chemical Engineering
- Bachelor of Science in Chemical Engineering

مسؤوليات التدريس

ADVANCED CERAMICS	2014/2015
ADVANCED MATERIALS SCIENCE	2010/2011
CERAMICS AND GLASSES	2013/2014 2014/2015 2015/2016
CERAMICS MATERIALS	2011/2012 2012/2013 2013/2014
INTEGRATED DESIGN PROJECT	2016/2017
SURFACE ENGINEERING AND TRIBOLOGY	2010/2011 2011/2012 2012/2013 2013/2014 2014/2015
THERMODYNAMICS OF MATERIALS	2014/2015 2015/2016 2016/2017 2017/2018 2018/2019 2019/2020
TRANSPORT PHENOMENA	2016/2017 2017/2018 2018/2019 2019/2020
WORKSHOP TECHNOLOGY	2010/2011

المشاريع البحثية

In Progress

- 2018 - Present** - Development of self-healing nanocoating via polyelectrolyte assemblies for corrosion protection applications.
- 2018 - Present** - Investigation On the Effectiveness of Various 'Green' Batik Wax Blends Extruded via Fused Deposition Modeling (FDM).
- 2016 - Present** - Development of Graphene-Magnetic Iron Oxide Water Based Nanofluid Coolant for machining applications
- 2015 - Present** - Direct Synthesis of Large Area Graphene for NEMS Application

2009 - Present Advanced Materials and Surface Engineering (AMSERU)

Completed

- 2014 - 2018** Fundamental Study on Metal Dusting Prevention of AISI 316 Stainless Steels by Using Copper Coating
- 2013 - 2016** Fundamental Studies on Hybrid ZnO-SiO₂ Sol-gel Nanocoating for Anticorrosion Protection of Carbon Steel
- 2013 - 2015** Development of Environmental Friendly ZnO Nanocoating for Building Applications
- 2012 - 2015** Prototype Development of High Performance Lightweight Nanocomposite Sport Shoes
- 2012 - 2016** Fabrication, Characterization and Measurement of Thermal Conductivity of Magnetic Nanofluids
- 2010 - 2013** Formation of Nanostructured Thin Iron Film Probed by Atomic Force Microscopy

المنشورات

Article

- 2018** [Experimental investigation and effective medium approximation of thermal conductivity of water based exfoliated Graphene nanofluids.](#) International Journal of Applied Engineering Research , 13 (10) pp.7477-7487
- 2018** [Effect of exfoliated graphene defects on thermal conductivity of water based graphene nanofluids.](#) International Journal of Applied Engineering Research , 13 (7) pp.4871-4877
- 2017** [Wear behaviour at 600°C of surface engineered low-alloy steel containing TiC particles.](#) Materials Science and Technology
- 2016** [Enhancement of thermal conductivity and kinematic viscosity in magnetically controllable maghemite \(\$\gamma\$ -Fe₂O₃\) nanofluids.](#) Experiment Thermal and Fluid Science , 77 pp.265-271
- 2016** [Microstructural aspects of wear behaviour of TiC coated low alloy steel.](#) Materials Science and Technology , 32 (4) pp.303-307
- 2015** [Fabrication and characterization of graphene from solid carbon dioxide.](#) Advanced Materials Research , 1115 pp.418-421
- 2015** [Effect of voltage on colloidal gold \(Au\) nanoparticles produced using electro-dissolution-reduction method.](#) Advanced Materials Research , 115 pp.386-386
- 2015** [Melting of multipass surface tracks in steel incorporating titanium carbide powders.](#) Materials Science and Technology , 31 (11) pp.1362-1369
- 2015** [Matrix cracking in reinforced polymer nanocomposites: a review.](#) Journal of Advanced Review on Scientific Research , 11 (1) pp.13-36

- 2014** [Phase and surface area studies of maghemite nanoparticles dispersed in silica gel.](#) Materials Research Innovations , 18 pp.S6-32-S6-35
- 2014** [Synthesis and characterisation of nanostructured Co-Pt magnetic films electrodeposited from tartrate-stabilised chloride baths.](#) Materials Research Innovations , 18 pp.S6-286-S6-290
- 2014** [Synthesis, characterisation and stability of superparamagnetic maghemite nanoparticle suspension.](#) Materials Research Innovations , 18 pp.S6-200-S6-203-S6-203
- 2014** [Effect of FeCl₂ concentration on the properties of magnetic nanoparticles by using Massart's procedure.](#) Sains Malaysiana , 43 (4) pp.611-616
- 2014** [Effect of nitric acid concentrations on synthesis and stability of maghemite nanoparticles suspension.](#) The Scientific World Journal , 2014 pp.1-7
- 2013** [Characterization of carbon nanotube aluminium nano composite- effect of ball milling time on particle size.](#) International Journal of Academic Research. Part A. Applied and Natural Sciences , 5 (2) pp.91-93
- 2013** [Effect of ball milling parameters on the synthesization of carbon nanotube aluminium nano composite.](#) Advanced Materials Research , 626 pp.537-541
- 2012** [Characterization and stability monitoring of maghemite nanoparticle suspensions.](#) Advanced Materials Research , 576 pp.398-401
- 2012** [Carbon nano tube reinforced aluminium matrix nano-composite: a critical review.](#) Australian Journal of Basic and Applied Sciences , 6 (12) pp.69-75
- 2012** [Effect of polyurethane/nanosilica composite coating on thermomechanical properties of polyethylene film.](#) Materials Technology: Advanced Performance Materials , 27 (1) pp.113-115(3)
- 2011** [Synthesis and characterization of Co-Fe nanocrystalline magnetic films electrodeposited from electrolyte solution containing sodium saccharin.](#) IEEE Transactions on Magnetics , 47 (10) pp.4398-4401
- 2010** [Synthesis of intermetallic Ni₃Al Alloy: properties and high temperature oxidation behavior.](#) Advanced Materials Research , 97-101 pp.386-389
- 2010** [Synthesis and characterization of nickel-iron-silicon nitride nanocomposite.](#) Advanced Materials Research , 97-101 pp.1360-1363
- 2010** [Influence of nanosilica/polyurethane composite coating on IR effectiveness and visible light transmission properties of polyethylene.](#) Advanced Materials Research , 97-101 pp.1669-1672
- 2010** [Preparation of maghemite-silica nanocomposites using sol-gel technique.](#) Advanced Materials Research , 97-101 pp.2140-2143
- 2010** [Preparation of manganese zinc ferrite nanoparticles by polymer matrix templated synthesis.](#) Advanced Materials Research , 97-101 pp.2171-2174
- 2010** [The effect of cobalt addition on structural and magnetic properties of electrodeposited iron-platinum nanocrystalline thin films.](#) Materials Science Forum , 654-6 pp.1736-1739

2010 [Synthesis of Ni₃Al/ZrO₂ nanocomposite and study on its high temperature oxidation in mixed gas environment](#) . Materials Science Forum , 654-6 pp.2739-2742

2010 [Structural characterization of electrodeposited nickel-iron alloy films](#) . Materials Science Forum , 654-6 pp.2430-2433

Conference or Workshop Item

2019 [Influence of surface energy and elastic strain energy on the graphene growth in chemical vapor deposition](#). In: **Nanotech Malaysia 2018 in conjunction with 3rd International Conference on Enabling Science and Nanotechnology (ESciNano 2018), 5th Malaysia Workshop on 2D Materials and Carbon Nanotube (2DMC 2018)**

2019 [Experimental investigation of concentration yields of liquid phase exfoliated graphene in organic solvent media](#). In: **4th International Conference on Mechanical, Automotive and Aerospace Engineering (ICMAAE 2018)**

2019 [Stability investigation of water based exfoliated graphene nanofluids](#). In: **4th International Conference on Mechanical, Automotive and Aerospace Engineering (ICMAAE 2018)**

2016 [Effect of citrate concentration on colloidal gold \(Au\) nanoparticles produced using electro-dissolution-reduction method](#). In: **Seminar on Advanced Materials haracterization Techniques in Research, Industry and Nuclear Applications, AMCT 2015**

2016 [Characterization of ball-milled carbon nanotube dispersed aluminum mixed powders](#). In: **3rd International Conference on Competitive Materials and Technology Processes (IC-CMTP3)**

2012 [Failure of woven fiber glass epoxy composite under charpy impact loading](#). In: **The 21st Scientific Conference of the Microscopy Society of Malaysia**

2012 [Physical property of multi walled carbon nanotube reinforced aluminium nano composite](#) . In: **World Research & Innovation Convention on Engineering & Technology (WRICET2012)**

Book

Book Section

2011 [Synthesis and characterization of electrodeposited iron-platinum nanostructured thin films](#). In: **Advances in Materials Engineering - Volume 2** IIUM Press . ISBN 9789674181680 , pp.157-163

2011 [Synthesis of magnetic nanoparticles in water-in-oil microemulsions](#). In: **Advances in Materials Engineering - Volume 2** IIUM Press . ISBN 9789674181680 , pp.164-169

2011 [Fabrication of nickel aluminide intermetallic-alumina nanocomposite](#). In: **Advances in composite materials** IIUM Press . ISBN 9789674182311 , pp.172-177

2011 [Synthesis and characterization of lithium manganese copper oxides for use in lithium rechargeable cells](#). In: **Contemporary metallic materials** IIUM Press . ISBN 9789674181642 , pp.59-64

2011 [Influence of grain size on magnetic properties of electroplated NiFe alloy](#). In: **Contemporary metallic materials** IIUM Press . ISBN 9789674181642 , pp.65-69

- 2011 [The effect of cobalt addition on structural and magnetic properties of electrodeposited iron-platinum nanocrystalline thin films.](#) In: **Contemporary metallic materials** IIUM Press . ISBN 9789674181642 , pp.155-162
- 2011 [Preparation and characterisation of low density polyethylene/layered silicate nanocomposites.](#) In: **Advances in materials engineering** IIUM Press . ISBN 9789674181673 , pp.137-143
- 2011 [Effects of sodium dodecyl benzene sulphonate \(NaDBS\) on Li Imide-PMMA based solid polymer electrolyte.](#) In: **Advances in materials engineering** IIUM Press . ISBN 9789674181673 , pp.144-148
- 2011 [Characterization of electroplated nanocrystalline NiFe alloy films .](#) In: **Advances in materials engineering** IIUM Press . ISBN 9789674181680 , pp.7-1
- 2011 [Mechanochemical synthesis of CeO₂ nanopowder using planetary ball mining.](#) In: **Contemporary metallic materials** IIUM Press . ISBN 9789674181642 , pp.163-169
- 2011 [Effect of composition on phase transformation of iron-platinum nanoparticles.](#) In: **Advances in materials engineering - volume 2** IIUM Press . ISBN 9789674181680 , pp.31-36
- 2011 [Effect of nanosized alumina reinforcement in intermetallic nickel aluminide on the formation of \$\gamma'\$ precipitates.](#) In: **Advances in materials engineering - volume 2** IIUM Press . ISBN 9789674181680 , pp.37-42
- 2011 [Fabrication of nickel aluminide \(Ni₃Al\) by hot isostatic pressing \(HIP\).](#) In: **Advances in composite materials** IIUM Press . ISBN 9789674182311 , pp.13-16
- 2011 [Investigation of mechanically alloyed Nd-Fe-B powder.](#) In: **Advances in composite materials** IIUM Press . ISBN 9789674182311 , pp.17-22
- 2011 [Synthesis and characterization Of nanocrystalline Ni₃Al intermetallic produced by mechanical alloying and reaction synthesis .](#) In: **Advances in composite materials** IIUM Press . ISBN 9789674182311 , pp.23-28
- 2011 [Stress analysis of backend metallization.](#) In: **Advances in Materials Engineering - Volume 2** IIUM Press . ISBN 9789674181680 , pp.132-136
- 2011 [Synthesis and characterization of nickel iron-silicon nitride nanocomposite.](#) In: **Advances in composite materials** IIUM Press . ISBN 9789674182311 , pp.167-171