

MARIYAM JAMEELAH GHAZALI

Professor

Centre for Materials Engineering & Smart Manufacturing,
Faculty of Engineering & Built Environment,
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Date of birth: 16th March 1975



FIELD OF SPECIALISATION

- Wear of materials
- Surface engineering
- Materials processing

EDUCATION AND ACADEMIC QUALIFICATION

- | | | |
|-------------------------------|---------------------------------|------|
| • University of Sheffield, UK | Ph.D. (Materials Eng.) | 2005 |
| • Universiti Sains Malaysia | M.Sc. (Materials Eng.) | 2000 |
| • Universiti Sains Malaysia | B. Eng. (Hons) (Materials Eng.) | 1999 |

PROFESSIONAL AFFILIATIONS

- Associate Member, Institution of Mechanical Engineers (2021 – to date)
- Graduate Technologist, Malaysia Board of Technologists (2021 – to date)
- Vice President, Asia Tribology Council (2018-2022)
- Secretary, Malaysian Tribology Society (MYTRIBOS) (2007-2018)
- Vice President (Academic), Malaysian Tribology Society (MYTRIBOS) (2022-2023)
- Life Member, Malaysian Tribology Society (MYTRIBOS) (2007-to date)
- Associate Member, Institute of Materials Malaysia (IMM) (2006-to date)
- Council Member, Asia Tribologists (ASIATRIB) (2007-to date)
- Graduate Member, Board of Engineers Malaysia (August 2008-to date)
- Life Member, Electron Microscopy Society of Malaysia (EMSM) (2006-to date)
- Committee, Scientific Research for Perbadanan Adat Melayu dan Warisan Negeri Selangor (PADAT) (2010 – to date).
- Member, Working Group of PVC-P pipes & Fittings for SIRIM (2006-2009)
- Member, Technical Committee on Fine Ceramics for SIRIM (2007-to date)
- Member, Working Group of Eco-labelling criteria for adhesives and water-based adhesives (WG/Z/9-5) SIRIM (2010- to date)
- Member, Institute of Materials (IOM) UK (2003-2006)
- Member, Society of Tribology & Lubricant Engineers (STLE) (2005-2007)

- Member (Student Pilot), Malaysian Experimental Aircraft Association (MEAA) (2003–2004).
- Member, Advanced Materials Processing & Integrity (AMPI) Group, UKM (2007–to date).
- Member, Malaysian Society for Engineering & Technology (MySET)
- Associate Member, Institute of Mechanical Engineers (IMechE) (202–2022)
- Professional Technologist (Ts.), Malaysian Board of Technologies (MBoT) (2021– to date)

CAREER HISTORY IN UKM

- Assistant Dean (Entrepreneurship & Creativity), Fac. of Eng. & Built Env. UKM (2020 – to date)
- Professional Engineer Training at Tenaga Nasional Berhad Research (2017–2018)
- Visiting Professor at Nagaoka University of Technology (March– April 2018)
- Chief Editor of *Jurnal Kejuruteraan* (Journal of Engineering): 2015 – 2017.
- Coordinator (Coursework) Graduate Studies of Mech. & Mater. Engineering, UKM: 2012 – 2015
- Associate Professor of Dept. of Mech. & Mater. Engineering, UKM: 2010 – present
- Coordinator (Research) Graduate Studies of Mech. & Mater. Engineering, UKM: 2010 – 2012
- Senior Lecturer of Dept. of Mech. & Mater. Engineering, UKM: 2007 – 2010
- Lecturer of Dept. of Mech. & Mater. Engineering, UKM: 2005 – 2007
- Tutor of Mech. & Mater. Engineering, UKM: 2002 – 2005
- Lecturer of College of Engineering, Universiti Tenaga Nasional : 2000 – 2001

SELECTED PROFESSIONAL APPOINTMENTS

- Reviewing Committee of World Tribology Conference 2013.
- Secretariat of International Conference on Fracture and Strength of Solids 2010.
- Chairperson of Regional Tribology Conference 2010.
- Secretariat of Malaysian International Tribology Conference 2013 & 2015.
- Scientific Panel, Student Assessment Centre for JPA Sponsorship 2013 & 2015.
- Technical Panel, National Science Foundation by MOSTI 2010 & 2015
- Chief Editor, *Ensiklopedia Kejuruteraan Alam Melayu* (ATMA) 2013
- Chief Editor, *Jurnal Kejuruteraan* (UKM) 2015 – 2017.
- Co-Founder & Secretary for Malaysian Tribology Society (MYTRIBOS) (2007–to date)

- Chairperson of Materials Lecture Competition Malaysia (University – National level) 2015 – to date.
- International Advisory Board of International Tribology Conference 2015
- Professional Engineer Training at Tenaga Nasional Berhad Research (2017–2018)
- Visiting Professor at Nagaoka University of Technology (March– April 2018)
- Vice President, Asia Tribology Council (Sept 2018–2022)

SELECTED RESEARCH AWARD & RECOGNITION

- 2nd Best poster competition, 14th International Conference of Wear of Materials (WOM) by Elsevier Inc., Washington D.C., 2003.
- Travel Grants to 15th International Conference of Wear of Materials (WOM) in San Diego, USA by the Royal Academy Engineering U.K., 2005.
- Travel Grants, International Nanotribology Forum: The Hoi An Discussion, Hoi An, Vietnam by Nanosurf AG Switzerland, 2007.
- 2nd Runner up in KIK Competition on Multi Purpose ENT Scope Storage, 27 October 2010, Universiti Kebangsaan Malaysia.
- Silver Medal, Malaysia Technology Expo (MTE) 2011
- Gold Medallist in Shell Eco-Marathon 2010 – Best Alternative Fuel
- 2nd Runners Up in Best Engineering & Design Award– Perodua Eco Challenge 2012.
- Top 4: Best Research 2010 (Fundamental Research Grant Scheme) – Ministry of Higher Education.
- Excellent Tribology Paper Award, Japanese Society of Tribologists, 2016.
- Best Tribology Poster Award, Anton Paar (M), 2016.
- Gold, Invention, Innovation & Design Exposition UiTM 2016–2018.
- Silver, Science, Technology and Engineering Expo Unimas 2016.
- Sakura Science Scholarship for Research Supervision, Japanese Science & Technology (JST) 2016 & 2023.
- Top 20 National Blue Ocean (NBOS) Competition 2016.
- Excellent Service Award 2007 (ref: UKM(S)3.6/111/137 Jld. 25 dated 30 Jun 2008)
- Excellent Teaching Award, 2011. Universiti Kebangsaan Malaysia.
- Excellent Teaching Award, 2013. Universiti Kebangsaan Malaysia.
- Excellent Service Award UKM 2015
- Sponsorship to Young Persons' World Materials Lecture Competition in Dublin, IMM (Institute of Materials Malaysia) 2015.
- Guest Speaker, IQRA' TV, United Kingdom 2015
- Keynote Speaker, Malaysia-Japan Tribology Symposium, Malaysia 2014
- Keynote Speaker, International Symposium on Advanced Materials in Defence, Indonesia, 2014.
- Keynote Speaker, International Tribology Workshop, India, 2019.

- Keynote Speaker, International Conference on Sustainable Materials (ICoSM) 2020, Malaysia.
- Keynote Speaker, The 1st International Conference on Corrosion and Surface Technology 2022 (I-CoST 2022), Vietnam.
- Plenary Speaker, The 5th international Conference on Science & Engineering Materials 2023 (ICOSEM 2023), Malaysia.

SUPERVISION OF POSTGRADUATE STUDIES

No. of students					
Ph.D.		M.Sc.		M.Eng.	
In Progress	Graduated	In Progress	Graduated	In Progress	Graduated
2	30	1	16	–	23

PUBLICATION (current H-index: 37 – google.scholar) *since 2010

Year	Journal Citation Report (JCR)				
	Q1	Q2	Q3	Q4	Total
2010	2	–	1	–	3
2011	1	–	1	–	2
2012	–	2	–	1	3
2013	5	3	–	1	9
2014	4	–	1	–	5
2015	2	–	1	2	5
2016	3	3	3	1	10
2017	12	3	1	1	17
2018	7	1	–	1	9
2019	4	1	–	1	6
2020	7	–	–	–	8
2021	2	–	2	–	4
2022	5	4		2	11
2023	2	–	–	–	2

INTELLECTUAL PROPERTY

- Laminated Ceramic Crown Engine Piston: PI 2012700797.
- Ergonomic Ballistic Body Armour (ENTRAP): (PN)MY-155730-A
- Sterilizing unit with built in timer for endoscope holder: UKM1.42/91/6/373.
- StepEase: Offloading Microball Footwear for diabetes: UKM IKB/108/2/1411.
- ReCAR: UKM IKB/108/2/663
- Orthopedic Implant & Method: MY-148588-A
- Method for forming Titanium Alloy: MY-150484-A



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3,585

Citations by **3,104** documents

212

Documents

31

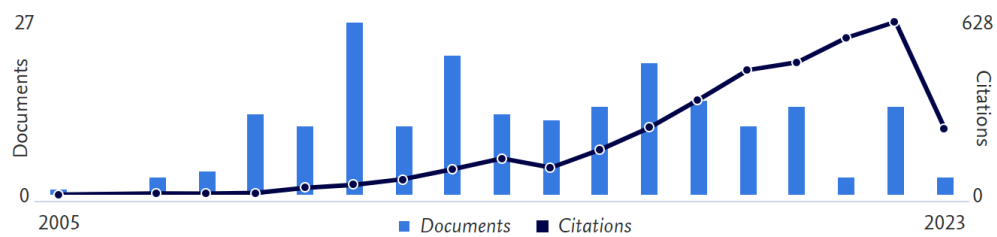
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Document & citation trends



*Selected academic publications in the last three years (2023-2021):

- HNA Bakar, JA Ghani, CHC Haron, **MJ Ghazali**, MS Kasim, S Al-Zubaidi, N Jouini, Wear mechanisms of solid carbide cutting tools in dry and cryogenic machining of AISI H13 steel with varying cutting-edge radius, *Wear* 523, 204758, **2023**.
- HA Zaharin, **MJ Ghazali**, N Thachnatharen, F Ezzah, R Walvekar, M Khalid, Progress in 2D materials based Nanolubricants: A review, *Flatchem*, 100485, **2023**.
- N Mohd, M Razali, **MJ Ghazali**, NH Abu Kasim, Current Advances of Three-Dimensional Bioprinting Application in Dentistry: A Scoping Review, *Materials* 15 (18), 6398, **2022**.
- A Rajabi, P Hodgson, *MJ Ghazali*, Z Sajuri, A Almaslow, HA Mehrabi, Amir Hossein Baghdadi, Challenges and solutions in the synthesis of nano-TiCN: A review, *Ceramics International*, 48, (7), **2022**.
- MIU Haq, A Raina, **MJ Ghazali**, M Javaid, A Haleem, Potential of 3D printing technologies in developing applications of polymeric nanocomposites, *Tribology of Polymer and Polymer Composites for Industry 4.0*, 193-210, **2021**.
- MJ Ghazali**, X Ren, A Rajabi, WFHW Zamri, N Mohd Mustafah, J Ni, Finite element analysis of cushioned diabetic footwear using ethylene vinyl acetate polymer, *Polymers* 13 (14), 2261, **2021**.

mariyam ghazali

<https://www.webofscience.com/wos/author/rid/AAH-7795-2019>

Web of Science ResearcherID: AAH-7795-2019

PUBLISHING SUMMARY

For manuscripts published from date range December 2017 - December 2022

(6) Ceramics International	(3) BioResources
(3) Advances in Materials Processing and Integrit...	(2) Journal of Materials Research and Technology
(2) International Journal of Integrated Engineering	(2) Journal of Mechanical Engineering and Scienc...
(2) Jurnal Tribologi	(2) Jurnal Kejuruteraan (Journal of Engineering)
(2) MATEC Web of Conferences	(1) Tribology - Materials, Surfaces and Interfaces
(1) International Communications in Heat and Ma...	(1) Renewable and Sustainable Energy Reviews
(1) International Journal of Hydrogen Energy	(1) Dental Materials Journal
(1) Journal of Dentistry	(1) Journal of Natural Fibers
(1) Journal of Zhejiang University SCIENCE A	(1) Tribology International
(1) International Conference on High Voltage Engi...	(1) Surface and Interface Analysis
(1) Jurnal Teknologi (Sciences & Engineering)	(1) Journal of Oil Palm Research
(1) Sains Malaysiana	(1) Proceedings of Mechanical Engineering Resea...
(1) Nanomaterials	(1) Wear
(1) International Journal of Materials and Product...	

MANUSCRIPTS PUBLISHED (42)

From date range December 2017 - December 2022

TIMES CITED**(ALL TIME)**

Wear characteristics of gas turbine fuel nozzle-contacting surface at different contact temperatures Published: Jun 2019 in Jurnal Tribologi	0
Synthesis, Characterization, and Antibacterial Activity of Ag2O-Loaded Polyethylene Terephthalate Fabric via Ultrasonic Method Published: Mar 2019 in Nanomaterials DOI: 10.3390/NANO9030450	16
Surface characterisation of TiCxN1-x coatings processed by cathodic arc physical vapour deposition: XPS and XRD analysis Published: Feb 2019 in Surface and Interface Analysis DOI: 10.1002/SIA.6626	8
The study on the properties of TiCxN1-x coatings processed by cathodic arc physical vapour deposition Published: Jan 2019 in Tribology - Materials, Surfaces and Interfaces DOI: 10.1080/17515831.2019.1580447	3
Effect of sintering temperature on the aging resistance and mechanical properties of monolithic zirconia Published: Jan 2019 in Journal of Materials Research and Technology DOI: 10.1016/J.JMRT.2018.07.017	24
The Effect of the Rheocast Process on the Microstructure and Mechanical Properties of Al-5.7Si-2Cu-0.3Mg Alloy Published: 2019 in Jurnal Kejuruteraan (Journal of Engineering) DOI: 10.17576/JKUKM-2019-31(2)-17	2
Superhydrophilicity of laser surface textured TiO2 coating for self-cleaning surfaces Published: 2019 in Proceedings of Mechanical Engineering Research Day (merd)	0
Oxidation Behaviour of SUS430 Ferritic Stainless Steel and Effects of Gaseous Cr Species Volatilization on LSCF Cathode Surface in Solid Oxide Fuel Cell Operating Temperature Published: 2019 in Sains Malaysiana DOI: 10.17576/JSM-2019-4804-18	4
Erosion resistance of laser textured plasma-sprayed Al(2)O(3)-13%TiO(2) coatings on mild steel Published: 2019 in Wear DOI: 10.1016/J.WEAR.2019.202937	14
Wettability Effect of the Surface Morphologies of Musa acuminata Leaves Published: 2019 in BioResources DOI: 10.15376/BIORES.14.4.8331-8344	2

Advanced 3Y-TZP bioceramic doped with Al ₂ O ₃ and MnO ₂ particles potentially for biomedical applications: study on mechanical and degradation properties Published: Oct 2018 in Journal of Materials Research and Technology DOI: 10.1016/J.JMRT.2017.05.015	10
Effects of TiO ₂ on microstructural, mechanical properties and in-vitro bioactivity of plasma sprayed yttria stabilised zirconia coatings for dental application Published: Mar 2018 in Ceramics International DOI: 10.1016/J.CERAMINT.2017.12.008	17
MICROSTRUCTURAL, SURFACE ROUGHNESS AND WETTABILITY OF TITANIUM ALLOY COATED BY YZP-30WT. % TiO ₂ FOR DENTAL APPLICATION Published: Mar 2018 in Jurnal Teknologi (Sciences & Engineering) DOI: 10.11113/JT.V80.10875	3
A review of key parameters for effective electrophoretic deposition in the fabrication of solid oxide fuel cells Published: 2018 in Journal of Zhejiang University SCIENCE A DOI: 10.1631/JZUS.A1700604	12
Synthesis and characterization of CaFe ₂ O ₄ nanoparticles via co-precipitation and auto-combustion methods Published: 2018 in Ceramics International DOI: 10.1016/J.CERAMINT.2017.08.203	36
Thermal conductivity of an ethylene glycol/water-based nanofluid with copper-titanium dioxide nanoparticles: An experimental approach Published: 2018 in International Communications in Heat and Mass Transfer DOI: 10.1016/J.ICHEATMASSTRANSFER.2017.10.005	52
Development and antibacterial application of nanocomposites: Effects of molar ratio on Ag ₂ O-CuO nanocomposite synthesised via the microwave-assisted route Published: 2018 in Ceramics International DOI: 10.1016/J.CERAMINT.2018.08.239	10
Preparation of presintered zirconia blocks for dental restorations through colloidal dispersion and cold isostatic pressing Published: 2018 in Ceramics International DOI: 10.1016/J.CERAMINT.2018.01.035	13
Wear characteristics of a combustion liner for power generation gas turbine Published: 2018 in International Journal of Materials and Product Technology DOI: 10.1504/IJMPT.2018.092939	0

Influence of Presintering Parameters on the Mechanical Properties of Presintered Dental Zirconia Block	0
Published: 2018 in International Journal of Integrated Engineering	
Development of anti-corrosive paint incorporated with henna extract as a natural inhibitor	10
Published: Dec 2017 in Journal of Mechanical Engineering and Sciences DOI: 10.15282/JMES.11.4.2017.20.0286	
Influence of calcination temperatures on structure and magnetic properties of calcium ferrite nanoparticles synthesized via sol-gel method	4
Published: 2017 in Jurnal Tribologi	
Tribological Characteristics of Banana Leaf	0
Published: 2017 in Advances in Materials Processing and Integrity: Non Metals and Hybrids	
Colloidal Processing of Zirconia Nanopowder for Dental Crown Applications	0
Published: 2017 in Advances in Materials Processing and Integrity: Non Metals and Hybrids	
Wax Effect on Hydrophobic Properties of Banana Leaves	3
Published: 2017 in Jurnal Kejuruteraan (Journal of Engineering) DOI: 10.17576/JKUKM-2017-29(1)-01	
Effect of TiN on Microstructure and Mechanical Properties of TiC-Based Cermets	0
Published: 2017 in Advances in Materials Processing and Integrity: Non Metals and Hybrids	
Review of titanate coupling agents and their application for dental composite fabrication	23
Published: 2017 in Dental Materials Journal DOI: 10.4012/DMJ.2016-014	
Finite Element Analysis of J-Integral for Surface Cracks in Round Bars under Combined Mode I Loading	14
Published: 2017 in International Journal of Integrated Engineering	
Effect of Treatments on the Physical and Morphological Properties of SPF/ Phenolic Composites	17
Published: 2017 in Journal of Natural Fibers DOI: 10.1080/15440478.2016.1266291	
Influence of mechanical properties on load sequence effect and fatigue life of aluminium alloy	5
Published: 2017 in Journal of Mechanical Engineering and Sciences DOI: 10.15282/JMES.11.1.2017.6.0227	
Quantitative analyses of TiC nanopowders via mechanical alloying method	18
Published: 2017 in Ceramics International DOI: 10.1016/J.CERAMINT.2017.07.171	

Influence of fatty acid methyl ester composition on tribological properties of vegetable oils and duck fat derived biodiesel Published: 2017 in Tribology International DOI: 10.1016/J.TRIBOINT.2016.12.008	38
Dynamic Mechanical Analysis of Treated and Untreated Sugar Palm Fibre-based Phenolic Composites Published: 2017 in BioResources DOI: 10.15376/BIORES.12.2.3448-3462	27
Synthesis and thermal conductivity characteristic of hybrid nanofluids - A review Published: 2017 in Renewable and Sustainable Energy Reviews DOI: 10.1016/J.RSER.2016.11.068	137
Metallic interconnects for solid oxide fuel cell: A review on protective coating and deposition techniques Published: 2017 in International Journal of Hydrogen Energy DOI: 10.1016/J.IJHYDENE.2016.03.195	133
Formation of sol-gel derived (Cu,Mn,Co)(3)O-4 spinel and its electrical properties Published: 2017 in Ceramics International DOI: 10.1016/J.CERAMINT.2017.03.060	19
Influence of Treatments on the Mechanical and Thermal Properties of Sugar Palm Fibre Reinforced Phenolic Composites Published: 2017 in BioResources DOI: 10.15376/BIORES.12.1.1447-1462	24
CORROSION INHIBITION OF MILD STEEL IN HYDROCHLORIC ACID SOLUTION USING FATTY ACID DERIVATIVES Published: 2017 in Journal of Oil Palm Research DOI: 10.21894/JOPR.2017.2901.11	8
Studies on the effects of titanate and silane coupling agents on the performance of poly (methyl methacrylate)/barium titanate denture base nanocomposites Published: 2017 in Journal of Dentistry DOI: 10.1016/J.JDENT.2016.11.012	26
Microstructure and mechanical properties of plasma sprayed Al ₂ O ₃ -1e3%TiO ₂ Ceramic Coating Published: 2017 in MATEC Web of Conferences DOI: 10.1051/MATECCONF/20178702027	7
Microstructural effects of banana leaf on adhesion and self cleaning behaviour Published: 2017 in MATEC Web of Conferences DOI: 10.1051/MATECCONF/20178702026	2

