



Curriculum Vitae

ASSOC. PROF. DR. HASMALIZA MOHAMAD



Hasmaliza Mohamad
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ACADEMIC QUALIFICATION:

Diploma Mechanical Engineering, Universiti Teknologi Malaysia, 1993
B.Eng. (Hons.) Materials Engineering, Universiti Sains Malaysia, 1997
M.Sc. Materials Engineering, Universiti Sains Malaysia, 1998
Ph.D. Ceramic / Composite, Universiti Sains Malaysia, 2005

EXPERIENCES:

Jan 1993 – Jun. 1993 Assistant Lecturer, Linton Institute of Technology, Ipoh, Perak
July 2005 – present Lecturer, School of Material and Mineral Resources Engineering, USM

RESEARCH INTEREST:

Ceramic/ Composite
Sol-Gel Synthesis
Alumina Fiber / Nanofiber
Nanostructure Ceramic Materials
Biomaterials

PROFESSIONAL/ACADEMIC ASSOCIATION (COMMITTEE/ MEMBER):

1. Life Member, Electron Microscopy Society of Malaysia (No. H021)
2. Member, Institute of Materials Malaysia (No. 2241)
3. Member, XAPP MNS (497/2007)
4. Life Member, Malaysian Science & Solid State Technology Society (MASS) (MASS 300)
5. Member, Material Research Singapore (MRS)
6. Graduate Member, Board of Engineer Malaysia (No 65359A)
7. Life Member, Malaysian Tribology Society (Mytribos) (L0511)

8. Ordinary Member, Malaysian Powder Metallurgy & Particulate Materials Association (2011/0042)
9. Graduate Member, Institute of Engineer Malaysia (51720)
10. Regular Member, American Ceramic Society (ACERs) (1145752)

ORGANIZED SEMINAR/ WORKSYOP/ CONFERENCE:

1. Judge for Scientific Poster Presentation at 2nd Colloquium on Post Graduate Research, Penang, 2007.
2. Treasurer for Institute of Materials Malaysia (IMM Northern Region) – 2007/2009.
3. Committee member for 10th AUN/SEED-Net Field-Wise Seminar, Penang, 2007
4. Committee member for Seminar Emerging Trends In IC And System Packaging Technologies organized by IEEE-CPMT, Malaysia Section, 2007
5. Committee member for Half day seminar on “Biomaterials.” by Prof Kuino Ishikawa (organized by IMM-SMMRE) at SMMRE, USM, 2008.
6. Committee member for Workshop on Autolab Electrochemical Impedance Spcetroscopy (EIS) at SMMRE, USM, 2008.
7. Chairman for Seminar on “Theory & Training On Visco Tester VT550 (Haake)” at SMMRE, USM, 2008.
8. Committee member for Workshop on “Nanoparticle and Polymer Nanocomposite: Synthesis and Characterizations” at SMMRE, USM, 2009.
9. Committee member for Shortcourse on “Sol Gel Science and Technology: Coating in Nano Century” at SMMRE, USM, 2009.
10. Committee member for Regional Conference on Materials at Equatorial Hotel, Penang, 2009
11. Committee member for RAMM & ASMP Conference at Bayview Hotel, Penang, 2009
12. Treasurer for One Day workshop on “Quantitative XRD Analysis” at SMMRE, USM, 2009.
13. Committee member for Seminar on Overview of Synthesis, Fabrication & Characterization of Materials with Theory of Inventive Problem Solving (TRIZ) at SMMRE, USM, 7 – 8 Oct. 2009.
14. Committee member for Workshop on Silica Sand Processing and Glass Production, 7 – 17 June 2010
15. Committee member for Workshop on Basic Metallurgy and Metallographic, 15-16 Dec. 2010
16. Committee Member for Short course on Statistical and Experimental Design, at SMMRE on 12 - 13 July 2011
17. Committee Member for Materials Characterizations using XRD, at SMMRE on 21 July 2011
18. Committee Member for Half day Seminar on Nano-TiO₂ for green Building, at SMMRE on 22 July 2011

19. Committee Member “Program Ceramah Motivasi (Halatuju dan Kerjaya Pelajar)”, 28 July 2011

HONORS AND AWARDS:

1. Academic Scholarship Teaching Scheme (ASTS), USM, 1998 – 2004
2. Bronze Medal, Malaysia Technology Expo (MTE), 2006 (Co-researcher)
3. Bronze Medal, Malaysia Technology Expo (MTE), 2007 (Main Researcher)
4. USM 2006 Hadiah Sanjungan: Product Category (Co-researcher)
5. USM 2007 Hadiah Sanjungan: Product Category (Main-researcher)
6. USM 2008 Hadiah Sanjungan: Publication Category
7. USM 2009 Anugerah Sanggar Sanjung: Publication Category
8. Silver Medal, International Invention, Innovation and Technology Exhibition (ITEX), 2010 (Co-researcher)
9. USM 2010 Anugerah Sanggar Sanjung: Publication Category
10. USM 2010 Hadiah Sanjungan: Product Category (Co-researcher)

PROFESSIONAL COURSES COMPLETED:

1. Research Techniques (organized by USM), USM Penang, 30 Oct. – 11 Nov. 1999.
2. Workshop on “X-Ray Analysis and Its Application” (organized by School of Materials & Mineral Resources Engineering, USM) at SMMRE, 2 – 3 June 2004.
3. Workshop on Nanomaterial: Theory, Synthesis and Characterization (organized by School of Materials & Mineral Resources Engineering, USM), at SMMRE, 31 Jan. – 4 Feb. 2005.
4. Workshop on Scientific Writing (organized by USM), at Auditorium USM Engineering Campus, 28 - 30 August 2006.
5. Seminar on Field Emission Scanning Electron Microscope (FESEM) and Energy Dispersive X-Ray Spectrometer (EDS) (organized by School of Materials & Mineral Resources Engineering, USM), at SMMRE, 13 – 14 Sept. 2006
6. Workshop on “Computational Chemistry / Material Science: Materials Studio” (organized by School of Materials & Mineral Resources Engineering, USM) at SMMRE, 4 Okt. 2006.
7. Kursus Pelaksanaan OBE, (organized by USM) at Auditorium USM Engineering Campus, 13 - 14 hb Dis 2006.
8. Workshop on Nanomaterial (organized UNIMAP), at Hotel Puteran Brasmana, Perlis, 23 – 24 Mei 2007
9. Workshop on “Acculturation of Research” (organized EITD, Eng. Campus, USM) at USM Engineering Campus, 29 Mei 2007.
10. Workshop on “Cooperative Learning” (organized by Jawatankuasa Pelaksanaan OBE & Unit Latihan, USM), at Teluk Dalam Resorts, Pulau Pangkor, Perak, 18 – 20 Jun 2007.

11. Seminar on “Emerging Trends In IC And System Packaging Technologies” by Prof Rao Tummala (organized by IEEE-CPMT, Malaysia Section) at USM Penang, 6 Ogos 2007.
12. Workshop on “Translational Research Network” (organized by IPPT, USM), at Equatorial Hotel, 14 – 15 Nov 2007.
13. Workshop on “Technical Problem Solving” (organized by IMM-SMMRE) at SMMRE, USM, 28 Jan 2008.
14. Half day seminar on “Biomaterials.” by Prof Kuino Ishikawa (organized by IMM-SMMRE) at SMMRE, USM, 30 Jan 2008.
15. Seminar on “Fundamental of Thermal Analysis” at SMMRE, USM, 30 April 2008.
16. Workshop on Autolab Electrochemical Impedance Spectroscopy (EIS) at SMMRE, USM, 28 May 2008.
17. Seminar on “Theory & Training On Visco Tester Vt550 (Haake)” at SMMRE, USM, 9th & 10th June 2008
18. Course on “Electron Backscattered in Scanning Electron Microscope” organized by SMMRE & Hi Tech Inst., 18-19 June 2008.
19. Workshop on “Nanoparticle and Polymer Nanocomposite: Synthesis and Characterizations” at SMMRE, USM, 13 – 15 January 2009.
20. Shortcourse on “Sol Gel Science and Technology: Coating in Nano Century” at SMMRE, USM, 9 – 10 February 2009.
21. Seminar Series On “Functional Material” at SMMRE, USM, 18 Feb. 2009.
22. One Day Workshop on “Quantitative XRD Analysis” at SMMRE, USM, 23 June 2009.
23. Course on “Introduction to TRIZ (Theory Of Inventive Problem Solving)” at Auditorium, USM Engineering Campus, 15 July 2009.
24. Seminar on Overview of Synthesis, Fabrication & Characterization of Materials with Theory of Inventive Problem Solving (TRIZ) at SMMRE, USM, 7 – 8 Oct. 2009.
25. Workshop on Nanosains Pelantar Fundamental, Pulau Pinang, 19 - 20 Nov. 2009
26. Workshop on Penyeliaan Calon Siswazah, at USM Pulau Pinang, 1 Dis 2009
27. Workshop on Quality Management II (ISO13485 Part II) at SMMRE, USM, 2 – 4 Dis. 2009
28. Workshop on “Strategic Future on Nanotoxicology Research” at Berjaya Langkawi Beach & Spa Resort, Kedah , 17 -19 Dis 2009
29. Workshop on “X’pert HighScore Plus XRD software” at SMMRE, USM, Jointly organized by DKSH Technology Sdn. Bhd. And SMMRE, USM, 1 - 3rd Feb. 2010
30. Workshop on “Niche Area” at SMMRE, USM, 13rd April 2010
31. Seminar on EQ Genius at SMMRE, USM, 28th April 2010

32. One Day Seminar On 'E-Learn@Usm: Transforming Nurturing & Learning' at Dewan Budaya, USM, 7 – 8 Oct. 2009.
33. Workshop on GMP Lab Part III at Bukit Jawi Golf Resort, Penang 2 – 4 Jun 2010
34. Q Seminar Series: Professional Registration at Auditorium, USM Engineering Campus, 30th June 2010
35. Seminar Safety & Health At Work organized by IEM Training Center, Penang, 1 – 2 Nov 2010
36. Workshop On Good Manufacturing Practice (GMP) IV, organized by Advanced Medical and Dental Institute, USM, 14 – 15 Dec 2010
37. Workshop On Good Manufacturing Practice (GMP) V, organized by Advanced Medical and Dental Institute, USM, 30 – 31 Dec 2010
38. Engineering Management Practice, organized by Board of Engineer on 25 – 26 April 2011
39. Short course on Statistical and Experimental Design, organized by MRiG, SMMRE, USM on 12 - 13 July 2011
40. Short course on Characterizations of Nanomaterials organized by AMREC, Kulim on 19-20 July 2011
41. One Day Workshop on Materials Characterizations using XRD, at SMMRE,USM on 21 July 2011
42. Workshop on Outcome Base Education: Assessment Form, USM on 19 – 20 Sept 2011
43. Workshop on e-Learning (Basic Moodle), USM on 28 Sept 2011
44. Mineral Symposium 2011, Tower regency Hotel, Ipoh, Perak, 18 – 20 October 2011

TEACHING:

Undergraduate B. Eng (Hons.)

- EBS 110/2 Engineering Drawing
- EBB 155/2 Introduction to Material Engineering Laboratory
- SHE 101/2 Ethnic Relation
- EBB 212/4 Raw Materials & Structural Ceramic
- EBB 250/2 Computer Methods for Engineer
- EUT 210/2 Technique of Thinking
- EBB 204/2 Materials Characterization Laboratory
- EBB 245/3 Materials Characterization
- EBB 332/3 Whiteware & Glasses
- EBB 325/2 Microscopy Laboratory
- EBB 317/2 Materials Processing Laboratory

EBB 425/3 Design & Development of Ceramic Materials

EBB 443/3 Technical Ceramic

Postgraduate MSc. (Mix Mode)

EBB 523 Ceramic Processing

EBB 524 Composite Materials

RESEARCH GRANT:

Completed

1. **Dr. Hasmaliza Mohamad (Leader)** "Penghasilan Gentian α -Al₂O₃ Tulen Bagi Aplikasi Komposit" USM Short Term Grant (6035202), RM19,236.00, 2006-2008
2. **Dr. Hasmaliza Mohamad (Leader)**, Pn. Khatijah Aisha Yaacob, Dr. Srimala Sreekantan "Mechanochemical Synthesis of Nanoparticle Cordierite For Electronic Application " Fundamental Research Grant Scheme (FRGS-6070016), RM80,000, 2006-2009
3. Dr. Srimala Sreekantan (Leader), **Dr. Hasmaliza Mohamad**, Prof. Zainal Arifin Ahmad "A Study on The Growth, Structure and Formation Mechanism of Multi-functional Titania Nanotubes" Fundamental Research Grant Scheme (FRGS), RM60,000, 2006-2009
4. Prof. Zainal Arifin Ahmad (Leader) **Dr. Hasmaliza Mohamad**, "Study on Concrete Properties Using Different Composition Of Blended Cement" AUNSEEDnet-JICA, 2006-2008
5. Assoc. Prof. Ahmad Fauzi Mohd Noor (Leader), **Dr. Hasmaliza Mohamad** " Nanosized ZrO₂ Reinforced Hydroxyapatite Bio-Composite For Improved Strength and Toughness" AUNSEEDnet-JICA, 2006-2008
6. Prof. Radzali Othman(Leader), **Dr. Hasmaliza Mohamad**, " Construction Materials based on Rice Straw/Rice Husk and Clay Composite" AUN/SEED-NET, JICA,2007-2009.
7. **Dr Hasmaliza Mohamad (Leader)**, " Production of Alumina Nanofibers by Sol-Gel Processing and Electrospinning Technique", RM171,500, e-Science Fund, 2007-2009.
8. Prof. Radzali Othman(Leader), **Dr. Hasmaliza Mohamad** "Nanostructured Glass-ceramic from rice straw (jerami)" e-Science Fund, 2007-2009.
9. Prof. Ahmad Fauzi Mohd Noor (Leader), **Dr. Hasmaliza Mohamad** "Development of Rare Earth substituted Mg-Mn ferrite system for microwave application" e-Science Fund, RM286,000, 2007-2009
10. Mohd Nazri Idris (Leader), **Dr. Hasmaliza Mohamad**, "synthesis and characterization of bioactive calcium phosphate-based glass Ceramic by sol-Gel Process " USM Short Term Grant (6035273), RM32,738.00, 2006-2008
11. **Dr. Hasmaliza Mohamad (Leader)**, "Study On The Parameters Influence The Synthesis Of Nanoporous Alumina Through Sol-Gel Auto Combustion Method" USM Short Term Grant (6035292), RM32,801.00, 2008-2010
12. Profesor Zainal Arifin Bin Ahmad (Leader), **Dr Hasmaliza Bt Mohamad**, Profesor Mani Maran A/L Ratnam , Ir Shuib Bin Sahudin "Study On The Fabrication Of High Wear Resistant Alumina-Zirconia-Magnesia Cutting Tools" USM RU Grant, RM102,000, 2009- 2011

13. **Dr. Hasmaliza Mohamad (Leader)**, “Insitu Synthesis of α -Cordierite using Talc, Kaolin and dolomite through glass route “ FRGS (6071200), RM40,000, 1 May 2010- 30 April 2012
14. **Dr. Hasmaliza Mohamad (Leader)**, Geran Insentif Pelajar- Norfadhilah Ibrahim (8023004), RM5,000, 2010-2011

Active

1. Dr Amir Hamzah Ahmad Ghazali (leader) Dr Ahmad Ramli Mohd Yahya, Dr Azura A Rashid, **Dr. Hasmaliza Mohamad**, Dr Yahya Mat Arip, Dr Zulkifli Mohamad Ariff , “Development of Rhizobial Inoculant of Leguminous Cover Crop Mucuna Bracteata Using Local Kaolin And Rice Husk As Carriers” USM RU Grant, RM96,949.12, 2009- 2012
2. **Dr. Hasmaliza Mohamad (Leader)**, Assoc. Prof. Dr. Ishak Mat, Dr. Siti Noor Fazliah Mohd Noor , Dr. Nor Aini Saidin “The development of nanoporous alumina scaffold for biomedical applications “ RU Grant (811173), RM147,696, 1 Jan 2011- 31 December 2013
3. **Dr. Hasmaliza Mohamad (Leader)**, “Effect of Synthesis Parameters on the Preparation of CNT-Alumina Hybrid Powder “ USM Short Term Grant (60311018), RM39,720.00, 15 May 2011-14 May 2013
4. Prof Radzali Othman (Leader), **Dr Hasmaliza Bt Mohamad** “Characterization and Reformulation of Tin Stimes” AUNSEEDnet-Jica, RM29,000.00, 1 April 2010- 15 Mac 2013
5. Prof. Zainal Arifin Ahmad (Leader), **Dr. Hasmaliza Mohamad**, “Scientific Study on the properties of Cambodian Clay-Based ceramic Tiles “AUNSEEDnet-Jica, RM29,000.00, 1 April 2010- 15 Mac 2013
6. Dr Siti Noor Fazliah Mohd Noor (Leader), Assoc. Prof. Dr Ishak Mat, **Dr. Hasmaliza Mohamad**, “Dental Pulp Stem Cells Response Cultured on Bioactive Nanocomposite Scaffold” USM Short Term Grant (6311045), RM39,730.00, 1 Jun 2011-31 May 2013
7. Dr Yeoh Fei Yee (Leader), **Assoc. Prof. Dr Hasmaliza Bt Mohamad**, Encik Mohamad Hasnor Bin Husin, Profesor Radzali Bin Othman, Dr Zuratul Ain Binti Abdul Hamid “Renal Toxin Removal Through Adsorption By Nanoporous Silica For Artificial Kidney Application” Exploratory Research Grant Scheme (ERGS), RM76,000.00, 1 August 2012- 31 July 2014
8. Dr Julie Juliewatty Mohamed (Leader), **Assoc. Prof. Dr Hasmaliza Bt Mohamad**, Profesor Mohd Zulkifly Bin Abdullah, Assoc. Prof. Dr Sabar Derita Hutagalung, Profesor Zainal Arifin Bin Ahmad, “Synthesis and Characterization of Pure and Ce Doped PZT for Piezo Motor Application” Exploratory Research Grant Scheme (ERGS), RM71,000.00, 1 August 2012- 31 July 2014
9. **Assoc. Prof Dr. Hasmaliza Mohamad (Leader)**, Prof Radzali Othman “Study On The Preparation Of Antibacterial Tiles” AUNSEEDnet-Jica, RM29,000.00, 29 Sept 2012- 15 Mac 2014

RESEARCH STUDENT:

Undergraduate Final Year Project B. Eng (Hons.)

1. **Neoh Eng Suan** “Kesan Nisbah Aspek Gentian Ke Atas Sistem Komposit $\text{Al}_2\text{O}_3 / \text{Al}$.” 2005/2006
2. **Mohd Azam Mohd Adnan** “Pencirian Kaca-Seramik Berliang Yang Dihasilkan Melalui Serbuk Halus Kaca Lithium Aluminosilikat” 2005/2006
3. **Suriani Yusuf** “Sintesis Bio-seramik : Trikalsium Fosfat” 2005/2006
4. **Salwa Suhana Jamil @ Suaid** “Penghasilan Kordierit Melalui Kaedah Sol-Gel.” 2005/2006
5. **Yang Peck Choo** “ Penghasilan Kordierit Melalui Kaedah Sol Gel Serta Kajian Sifat-Sifatnya Sebagai Pengisi Dalam Polimer Termoset.” 2006/2007
6. **Siti Rahayu Muai'i** “ Pencirian Serbuk Alumina Halus Yang Dihasilkan Melalui Kaedah Sol Gel.” 2006/2007
7. **How Shu Sheng** “ Kesan Parameter Pemprosesan Terhadap Penghasilan Serbuk Alumina Halus Melalui Kaedah Sol Gel” 2006/2007
8. **Lee Jo Sheng** “ Kajian Terhadap Sistem Ferit Mg-Mn Didop Bahan Nadir Bumi.” 2006/2007
9. **Tan Yin Chow** “ Kesan Suhu Pensinteran Terhadap Sifat-Sifat Kordierit Yang Dihasilkan Melalui Kaedah Sol Gel” 2006/2007
10. **Chuah Ze Min** “Solid State reaction of copper coated alumina fiber for CuAlO_2 formation”. 2007/2008.
11. **Liong Wai Lap** “Comparison study on the effect of addition P_2O_5 and ZrO_2 on the properties of cordierite”. 2007/2008.
12. **Radin Shafinaz Jamil** “Synthesize of porous alumina through sof combustion method.”. 2007/2008.
13. **Nurazreen Aris** “Study on the effect of surfactant on the particle size and shape of alumina powder.”. 2007/2008.
14. **Ruzainah Abdullah** “Effect of grinding parameter on the synthesise of cordierite powder.” 2007/2008.
15. **Nurzirah Abdul Majid** “ Al_2O_3 -Cu composite system prepared by powder metallurgy”. 2007/2008.
16. **Tan Chee Lik** “Effect Of Processing Parameters On The Production Of Alumina Fiber Through Microfibre Spinnerette Method” 2008/2009.
17. **Mohd Fadli Bin Ahmad Rasyid** “Synthesis Of Nanoporous Silica Via Chemical Method: Effect Of Sintering Temperature.” 2008/2009.
18. **Chan Wah Kean** “Effect Of PEG On The Nanoporous Silica Produced By Chemical Method.” 2008/2009.
19. **Mohd Helfy Affzan Bin Shahidan** “Effect of Different Additives On The Properties Of Cordierite Produced By Mechanochemical Method.” 2008/2009.
20. **Nurul Farhana Bt Ibrahim** “Study On The Al_2O_3 -Hap Biocomposite.” 2008/2009.
21. **Nurfateen Fakhariah Binti Ahmad** “Effect Of Molar Ratio On The Physical And Mechanical Properties Of Porous Alumina.” 2008/2009.

22. **Goh Chun Hwei** “Effect of various drying condition on the preparation of silica aerogel” 2009/2010
23. **Chai Wee Kiat** “Comparison study on synthesis of α -cordierite glass-ceramic by using mineral precursors and pure oxides for low temperature co-fired ceramic (LTCC) application” 2009/2010
24. **Ahmad Burhanuddin Ahmad Bakhir** “Study on the effects of composition and annealing time on the properties of crystal glass using local silica sand” 2009/2010
25. **Hanisah Abdul Rani** “Effects Of Percentage Of Alumina Reinforcement And Sintering Temperature On The Properties of Alumina-Aluminum Composite” 2010/2011
26. **Siti Naqiah Musa** “Study On The Production Of Porous Cordierite Through Replication Of Polymeric Sponge Method” 2010/2011
27. **Teow Chenn Yang** “Production Of Porous Alumina Using Wheat Flour And Wheat Starch As Pore Forming Agents” 2010/2011
28. **Lee Yu Min** “Formation of porous cordierite using different types of pore former” 2011/2012
29. **Abdul Rahim Yusup** “Effect of beads on the formation of porous alumina” 2011/2012

Completed PhD (Research)

1. **Fatemeh Mirjalili** (UPM- 2010) – Preparation and Characterization of α -alumina Nanoparticles and α -alumina-Based Polypropylene Nanocomposites
2. **Banjuraizah Johar** (2011) – The Synthesis of Non-Stoichiometric Cordierite Via Glass Ceramic Route using Calcined Talc and Kaolin
3. **Bun Kim Ngun** (2012) – Characterization of Cambodian Clays and Their Suitability for Ceramic Tiles Application

Completed MSc. (Research)

1. **Bun Kim Ngun** (2008) – Study OF Silica Fume and Rice Husk Ash on the Properties of Cement Paste And Concrete.
2. **Firmandika Harda** (2008) – Zirconia Reinforced Hydroxyapatite Biocomposite for Strength and Toughness Improvement
3. **Kry Nallis** (2009) - Comparative Study on the Properties of Rice Straw/Polypropylene and Micaceous Clay/Polypropylene Composites
4. **Jenney Ngu Lim Song** (2011) (UPM-Full Time) – Linear Low Density Polyethelene Nanocomposite Filled with Nano Alpha-Alumina: Characterization of Mechanical, Morphological and Thermal Properties.
5. **Radin Syafinaz Jamil** (2012) – Synthesis of Porous Alumina through Sol-gel Auto-combustion Method for Biomedical Application
6. **Nor Fadhilah Ibrahim** (2013) - Effect of Dolomite And Pure Oxides on the α -Cordierite Synthesis

Completed MSc. (Mix-Mode)

1. **Nurul Farhana Bt Ibrahim** (2010) – Effect on Partially Addition of CaO On The Synthesis Of Cordierite Using Kaolin and Talc Through Glass Route

Ongoing PhD (Research)

1. **Ahmad Zahirani Ahmad Azhar** (P-GD0124) (Full Time) Improvement of Vickers Hardness and Fracture Toughness of Zirconia Toughened Alumina Via the Addition of MgO and Cr₂O₃
2. **Siti Noor Fazliah Mohd Noor** (Imperial College, London-Full Time) -Investigation of nanocomposites scaffold

Ongoing MSc. (Research)

1. **Phoumiphon Nordala** (Full Time) Effect of Mechanical Activation on the Fluxing Properties of Feldspar
2. **Thiphanit Phommixay** (P-GM0018/12(R)) (Full Time) - Study on the Production of Antibacterial Tiles

PUBLICATIONS:

International Journal:

1. Hasmaliza Mohamad, Ahmad Fauzi Mohd Noor and Zainal Arifin Ahmad, (2008) "Influence of Alkoxide Molar Ratio on Rheological Study of Alumina Sol for Fibre Preparation", Journal of Synth. React. Inorg. Met.-Org. Nano-Metal Chem, Vol. 3, Issue 3, p. 322-324, Impact Factor: 0.54
2. Hasmaliza M., Choo Y. P. & Chow, T. Y., (2008) "Effect of Sintering Temperature on the Synthesis of High Purity Cordierite, Neutron And X-Ray Scattering In Materials Science And Biology , AIP Conference Proceeding, vol. 989, 161-163, Publisher: American Institute Physics, ISBN 978-0-7354-0508-0, ISI listed
3. Johar Banjuraizah, Hasmaliza Mohamad, Zainal Arifin Ahmad, (2009) "Crystal Structure Of Single Phase And Low Sintering Temperature Of α -Cordierite Synthesized From Talc And Kaolin", Journal Of Alloys And Compounds 482 , 429-436, Impact Factor: 1.510
4. F. Mirjalili, L. Chuah, A. B. Dayang, M. Hasmaliza , R. Aghababazadeh and F. Ahmadun, (2009) "Mechanical Properties of α -Al₂O₃/PP Nanocomposite", Journal of Applied Sciences, 9 (17) 3199-3201, ISI listed
5. Johar Banjuraizah, Hasmaliza Mohamad, Zainal Arifin Ahmad, (2010) "Thermal expansion coefficient and dielectric properties of non-stoichiometric cordierite compositions with excess MgO mole ratio synthesized from mainly kaolin and talc by the glass crystallization method" Journal of Alloys and Compounds, 494, 256-260, Impact Factor: 2.135
6. F. Mirjalili, M. Hasmaliza, L. Chuah Abdullah, (2010) "Size-controlled synthesis of Nano α -Alumina Particles through the Sol-Gel Method" Ceramics International, 36, 1253–1257, Impact Factor: 1.369
7. Ahmad Zahirani Ahmad Azhar, Hasmaliza Mohamad, Mani Maran Ratnam, Zainal Arifin Ahmad, (2010) "The effects of MgO addition on microstructure, mechanical properties and wear performance of zirconia-toughened alumina cutting inserts" Journal of Alloys and Compounds, 497, 316-320, Impact Factor: 2.135

8. Bun Kim Ngun, Hasmaliza Mohamad, Etsuo Sakai and Zainal Arifin Ahmad (2010), "Effect of rice husk ash and silica fume in ternary system on the properties of blended cement paste and concrete", *Journal of Ceramic Processing Research*, 11, 3, 311-315, Impact Factor: 0.402
9. Hasmaliza M., Srimala S. & Pek Choo Y, (2010) Synthesis of High Purity Cordierite via Sol-Gel Method, *International Conference On Advanced Materials and Nanotechnology*, AIP Conference Proceedings, 1217, 192-194, Publisher: American Institute Physics, ISBN: 978-0-7354-0760-2, ISI listed
10. Johar Banjuraizah, Hasmaliza Mohamad, Zainal Arifin Ahmad (2011), "Effect of melting temperatures on the crystallization and densification of $2.8\text{MgO}\cdot 1.5\text{Al}_2\text{O}_3\cdot 5\text{SiO}_2$ glass-ceramic synthesized from mainly talc and kaolin", *Journal of Alloys and Compounds*, 509, 1874-1879, Impact Factor: 2.135
11. Muhammad Helmi Abdul Kudus, Hazizan Md. Akil, Hasmaliza Mohamad, Lim Eng Loon (2011), "Effect of catalyst calcination temperature on the synthesis of MWCNT–alumina hybrid compound using methane decomposition method", *Journal of Alloys and Compounds*, 509, 2784-2788, Impact Factor: 2.135
12. Johar Banjuraizah, Hasmaliza Mohamad, Zainal Arifin Ahmad (2011), "Effect of impurities content from minerals on phase transformation, densification and crystallization of α -cordierite glass-ceramic", *Journal of Alloys and Compounds*, 509, 7645-7651, Impact Factor: 2.135
13. Ruzainah Abdullah, Srimala Sreekantan and Hasmaliza Mohamad (2011) "Effects Of The Polyvinyl Alcohol (PVA) On The Synthesis Of Alumina Fibers Through Electrospinning Technique" *Periodical Journal of Advanced Materials Research* 173, 150-154, Trans Tech Publications, Switzerland
14. Ahmad Zahirani Ahmad Azhar, Foo Tai Kong, Hasmaliza Mohamad, Mani Maran Ratnam, Zainal Arifin Ahmad (2011) "Effects Of particle Sizes of Magnesium Oxide on Zirconia Toughened Alumina Vickers Hardness" *Periodical Journal of Advanced Materials Research* 173, 29-34, Trans Tech Publications, Switzerland
15. Banjuraizah Johar, H. Mohamad, Z. A. Ahmad (2011) "Rietveld Quantitative Phase Analysis of Non-Stoichiometric Cordierite Synthesized from Mainly Talc and Kaolin: effect of Sintering Temperature" *Periodical Journal of Advanced Materials Research* 173, 190-195, Trans Tech Publications, Switzerland
16. Banjuraizah Johar, H. Mohamad, Z. A. Ahmad (2011) "Characterization and Phase Evolution of Cordierite Based Glass Synthesis From Pure Oxide and Minerals" *Periodical Journal of Advanced Materials Research* 173, 196-201, Trans Tech Publications, Switzerland
17. Muhammad Helmi Abdul Kudus, Hazizan Md. Akil, Hasmaliza Mohamad, (2011), "Synthesis of MWCNT-Alumina Hybrid as Composite Reinforcement using Nickel Catalyst", *Periodical Journal of Key Engineering Materials*, Vol. 471 – 472, 596-600, DOI 10.4028/www.scientific.net/KEM.471-472.596
18. Ahmad Zahirani Ahmad Azhar, Hasmaliza Mohamad, Mani Maran Ratnam, Zainal Arifin Ahmad (2011) "Effect of MgO particle size on the microstructure, mechanical properties and wear performance of ZTA-MgO ceramic cutting inserts" *International Journal of Refractory Metals and Hard Materials*, 29 (4), 456-461
19. Banjuraizah Johar, H. Mohamad, Z. A. Ahmad (2011) "Effect of excess MgO mole ratio in a stoichiometric cordierite ($2\text{MgO}\cdot 2\text{Al}_2\text{O}_3\cdot 5\text{SiO}_2$) composition on the phase transformation and crystallization behavior of magnesium aluminum silicate phases" *International Journal of Applied Ceramic Technology*, 8 (3), 637-645, Impact Factor: 1.627
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38. Sensor Letters, 2012 "Development of MWCNT/alumina nanocomposite based sensor for trace level ammonia gas sensing" (Publisher: America Scientific)
39. Periodical Journal of Advanced Materials Research, 2012", Trans Tech Publications Ltd: "X-Ray Diffraction Study of HVOF Sprayed Cr₃C₂-NiCr Coating"
40. Periodical Journal of Advanced Materials Research, 2012", Trans Tech Publications Ltd: "The effect of CaCO₃ addition on ZnO crystal glaze"
41. Periodical Journal of Advanced Materials Research, 2012", Trans Tech Publications Ltd: "Determination of Crystallite Size in Synthetic and Natural Hydroxyapatite: A Comparison Between XRD and TEM Results"
42. Periodical Journal of Advanced Materials Research, 2012", Trans Tech Publications Ltd: "Synthesis, Characterisation And Catalytic Activity Of Sol-Gel Derived Silica-Mineral Acids"
43. Periodical Journal of Advanced Materials Research, 2012", Trans Tech Publications Ltd: "The Effect Of MgO Dopant On The Dielectric Properties Of CaCu₃Ti₄O₁₂ Ceramics"

Examiner Theses

PhD.

1. Internal Examiner for a candidate (Mechanical Engineering) on "Penggunaan Komposit Seramik Sebagai Bahan Mata Alat Potong" - Candidate: Muhammad Sobron Yamin Lubis, Julai 2006
2. Internal Examiner for a candidate (Material Engineering) on "Sintesis β -TCP pada Suhu Rendah Melalui Kaedah Kimia Basah Dan Kajian Komposit – β -TCP/ CPP" - Candidate: Shahrizal Kasim, 2008
3. Internal Examiner for a candidate (Civil Engineering) on "The Potential Use of Rice Husk as partial Replacement Materials in Fired-Clay Brick" - Candidate: Izwan Johari, 2009
4. Internal Examiner for a candidate (Material Engineering) on "Penghasilan, Pencirian dan Sifat-Sifat porselin Berliang yang Dihasilkan Melalui Teknik Replika Span Polimer dan Potensinya Sebagai Teras Komposit Sanwic" - Candidate: Mohd Al Amin Mohamad Nor, 2010
5. Internal Examiner for a candidate (Material Engineering) on "Electrophoretic deposition and Characterization of Ceramic Coatings on Dental Implant" - Candidate: Asam M. A Abdulazez July, 2012

MSc. (Research)

1. Internal Examiner for a candidate (Material Engineering) on "Kesan Parameter Pemprosesan Terhadap Mutu Hasil Alumina Tuangan"- Candidate: Balakrisnan A/L Simman Chalam, Julai 2006
2. Internal Examiner for a candidate (Material Engineering) on "Synthesis of Hydroxyapatite Powders via Mechanical Activation Technique" - Candidate: Zarina Omar, April 2007.
3. Internal Examiner for a candidate (Material Engineering) on "The Synthesis Of Nanosized Hydroxyapatite Powder" - Candidate: Tan Su Anne, April 2007.
4. Internal Examiner for a candidate (Material Engineering) on "Synthesis of β -TCP Via a Wet preparation and a Hydrothermal Methods" - Candidate:Pham Trung Kien, April 2007.
5. Internal Examiner for a candidate (Material Engineering) on "Fabrikasi Hidroksiapatit Tumpat Melalui Kaedah Penekanan Isostatik Sejuk (CIP) dan Penekanan Isostatik Panas (HIP)" - Candidate:Yushamdan Yusof, April 2007.
6. Internal Examiner for a candidate (Material Engineering) on "Penghasilan dan Pencirian Kaca Kristal Menggunakan Pasir Silika Paling Kenangan yang Ditambahnilai" - Candidate: Mohamad Haniza Borhan, April 2007.
7. Internal Examiner for a candidate (Mix-Mode: Material Engineering) on "The Effect Of Composition & Binder On The Mechanical Properties And Wear Resistance Alumina/Zirconia Cutting Tools" - Candidate: Ahmad Zahirani Ahmad Azhar, Mei 2008.
8. Internal Examiner for a candidate (Material Engineering) on "Abu Sekam Dalam Kaca, Seramik Kaca Dan Komposit Polimer" - Candidate: Hamisah Ismail, June 2009.
9. Internal Examiner for a candidate (Material Engineering) on "Investigation of SiO₂ Film Deposited on Si Substrate via Ultrasonic Spray Pyrolysis" - Candidate: Cahyo Budi Nugroho, 2009.

10. Internal Examiner for a candidate (Materials Engineering) on “Abu Jerami Dalam Kaca dan Komposit Polimer” - Candidate: Hamisah Ismail, 2009.
11. Internal Examiner for a candidate (Materials Engineering) on “Development of Porous Sintered Alumina by a Sponge Scaffolding Method and Forming Agent Using Natural Bioresources” - Candidate: Sengphet Keokangdong, 2010
12. External Examiner for a candidate (Materials Engineering, UNIMAP), on “ The Effect Of Different Sintering Temperature And Soaking Time To The Properties Of Dense Natural Hydroxyapatite” – Candidate: Shahrizal Md Hussein, June 2011
13. Internal Examiner for a candidate (Materials Engineering) on “Synthesis and characterizations of mesoporous hydroxyapatite” - Candidate: Liew Kien Seng, June 2011
14. Internal Examiner for a candidate (Materials Engineering) on “Methane Absorption Of Zeolites And Activated Carbon Fiber Derived From Agricultural Waste” - Candidate: Tan Wen Cheng, June 2011
15. Internal Examiner for a candidate (Materials Engineering) on “Penyelidikan Kesan penambahan CaCO₃ terhadap kelakuan licau hablur ZnO pada suhu pembakaran glos dan pengaruh suhu penghabluran” - Candidate: Abdul Rashid Jamaludin, June 2011
16. External Examiner for a candidate (Mechanical Engineering, UTHM) on “ Reinforcement of Organic Fiber in ceramic Shell Mould System for Investment Casting Process” – Candidate: Noor Hasliza Kamarudin, July 2012

MSc. (Mix-Mode)

1. Internal Examiner for a candidate (Material Engineering) on “The Effect of Composition & Binder on the Mechanical Properties and Wear Resistance Alumina/Zirconia Cutting Tools” - Candidate: Ahmad Zahirani Ahmad Azhar, Mei 2008.
2. Internal Examiner for a candidate (Material Engineering) on “Sintering Characteristics of nano-structured TiC reinforced aluminum matrix composites” - Candidate: Sameer Falih Hamad, Jun 2010.
3. Internal Examiner for a candidate (Material Engineering) on “Studies on Bio-Ceramic Such as Hydroxyapatite (HAP) Coating on Bio-Implants by Hot/Cold Spray Deposition” - Candidate: Che Wan Noorakma Abdullah, July 2012.

Invited Lectures

1. Invited Lecture at Workshop On Silica Sand Processing And Glass Production organized by SMMRE, USM Engineering Campus, June, 2010, *Firing of Ceramics*
2. Invited Lecture at Workshop On Silica Sand Processing And Glass Production organized by SMMRE, USM Engineering Campus, June, 2010, *Glaze and Decorations of Ceramics*
3. Invited Lecture at Workshop On Silica Sand Processing And Glass Production organized by SMMRE, USM Engineering Campus, June, 2010, *Glass Properties*

4. Invited Lecture at The Shortcourse Training For Polymer and Composite Technology (PMCT) and Metal and Ceramic Technology (MCT) organized by UNIMAP, Perlis, July, 2010, *Ceramic Raw Materials*
5. Invited Lecture at The Shortcourse Training For Polymer and Composite Technology (PMCT) and Metal and Ceramic Technology (MCT) organized by UNIMAP, Perlis, July, 2010, *Mould Making*
6. Invited Lecture at The Shortcourse Training For Polymer and Composite Technology (PMCT) and Metal and Ceramic Technology (MCT) organized by UNIMAP, Perlis, July, 2010, *Forming method*
7. Invited Lecture at The Shortcourse Training For Polymer and Composite Technology (PMCT) and Metal and Ceramic Technology (MCT) organized by UNIMAP, Perlis, July, 2010, *Drying and Firing*
8. Invited Lecture at The Shortcourse Training For Polymer and Composite Technology (PMCT) and Metal and Ceramic Technology (MCT) organized by UNIMAP, Perlis, July, 2010, *Glazing and Decorations*
9. Invited Lecture at The Shortcourse Training For Polymer and Composite Technology (PMCT) and Metal and Ceramic Technology (MCT) organized by UNIMAP, Perlis, July, 2010, *Characterizations*
10. Invited Lecture at The Shortcourse Training For Polymer and Composite Technology (PMCT) and Metal and Ceramic Technology (MCT) organized by UNIMAP, Perlis, July, 2010, *Properties and Applications*
11. Invited Lecture at The Shortcourse Training For Polymer and Composite Technology (PMCT) and Metal and Ceramic Technology (MCT) organized by UNIMAP, Perlis, July, 2010, *Overview on Advanced Ceramic*