

## PERSONAL DETAILS

Name: Dr. Hj. Khairul Anuar bin Shariff

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Phone number: +604-5996129 (Office), +6017-4513081 (H/P)

Email: biokhairul@usm.my / mppusm@gmail.com

**Area of specialization:** Bioceramic, Ceramic coating, Bone remodeling, Ceramic Material, Sustainable Asphalt characterization

**Registered ID:** Researcher ID: G-6625-2016 ORCID ID: 0000-0003-3331-2505 SCOPUS ID: 57056116600

# **EDUCATION**

Department of Biomaterials, Faculty of Dental Science, Kyushu University, Japan.	
Doctor of Philosophy (Ph.D.) in Biomaterials	2016
School of Materials and Mineral Resources Engineering, Universiti Sains Malaysia, Eng Campus, Pulau Pinang, Malaysia.	gineering
Master of Science (M.Sc.) Materials Engineering	2011
School of Materials and Mineral Resources Engineering, Universiti Sains Malaysia, Eng Campus, Pulau Pinang, Malaysia.	gineering
Bachelor of Engineering (B. Eng.) Materials Engineering	2008

## **SCHOLARSHIP AWARDS**

Academic Staff Training Scheme (ASTS) Universiti Sains Malaysia	2012-2016
JICA/AUN-SEED Net Scholarship (Long Term Training Programme)	2012-2016
USM Fellowship (M.Sc. study)	2009-2010
Penchem Technologies Sdn Bhd Scholarship (M.Sc. study)	2009-2010

# **WORKING EXPERIENCE**

R&D Engineer Penchem Technologies Sdn Bhd	2010-2012	
- Leader Flagship Program for Conductive Adhesive (Epoxy Based Conductive Adh	hesive)	
Leader Flagship Program for Silicone and Epoxy Thermal Interface Materials (TIM)		
- Coordinator for Quality Management System (QS 16949-Automotive Industry)		
- Coordinator for MATRADE SME Awards		
Application Engineer Enge Plas Automation Sdn Bhd	2008	
- Designing silo tank for chemical plant or production lines in factories. Able t	o use Solidworks	
software (3D Drawing) for engineering part.		
Research Assistant SIRIM (AMREC)	2007	
- Involved in developing pressure vessel made from fiberglass chopping fiber	and epoxy. Also	
learn how to use filament winding.		

### **LIST OF PUBLICATIONS**

1. <u>S. Khairul Anuar Shariff</u>, M. Mariatti, A. Azizan, N. Chee Mang, W.T. Tham. Effect of different types of silver and epoxy system on the properties of silver/epoxy conductive adhesives. *Journal of Materials Science: Materials in Electronics* vol. 22(7) (2011) pp. 757-764.

<u>Khairul Anuar Shariff</u>, Kanji Tsuru, Kunio Ishikawa. Fabrication of interconnected pore forming α-tricalcium phosphate foam granules cement. *Journal of Biomaterials Application* vol. 30(6) (2016) pp. 838-845.

3. <u>Khairul Anuar Shariff</u>, Kanji Tsuru, Kunio Ishikawa. Regulation of DCPD formation on β-TCP granular surface by exposing different concentration of acidic calcium phosphate solution. *Key Engineering Materials* vol. 696 (2016) pp. 27-31.

4. Siti Noorzidah Mohd Sabri, Syazana Abu Bakar, Abdul Yazid Abdul Manaf, Siti Farhana Hisham, Mohd Azmirrudin Ahmad, K. Jamuna Thevi, Kartini Noorsal, <u>Khairul Anuar Shariff</u>, Kunio Ishikawa. Phase transformation of biphasic granules of gypsum and carbonate apatite at low temperatures. *Advanced Materials Research* vol. 1133 (2016) pp. 50-54.

5. <u>Khairul Anuar Shariff</u>, Kanji Tsuru, Kunio Ishikawa. Fabrication of dicalcium phosphate dihydrate-coated  $\beta$ -TCP granules and evaluation of their osteoconductivity using experimental rats. *Materials Science and Engineering C* vol. 75 (2017) pp. 1411-1419.

<u>Khairul Anuar Shariff,</u> Kanji Tsuru, Kunio Ishikawa. Micro-CT evaluation on osteoconductivity of DCPD-coated β-TCP granule using experimental rats. Journal of Physic: Conference Series vol 1082 (2018) pp. 012069.

Mohamad Hafizi Abu Bakar, Mohamad Nurul Azmi, <u>Khairul Anuar Shariff</u>, Joo Shun Tan.
Withaferin A Protects Against High-Fat Diet–Induced Obesity Via Attenuation of Oxidative Stress,

Inflammation, and Insulin Resistance. *Applied Biochemistry and Biotechnology* vol. 188 (2019) pp. 241-259.

M. Chuthatip, M.N. Ahmad Fauzi, B.I. Yanny Marliana, <u>S. Khairul Anuar</u>, K. Masakazu, I. Banhan. Effect of Magnesium Oxide on Physical and Biological properties in β-tricalcium phosphate ceramic. *Journal of Physic: Conference Series* vol 1082 (2018) pp. 012026

9. Hossein Mohammadi, Yanny Marliana Baba Ismail, <u>Khairul Anuar Shariff</u>, Ahmad Fauzi Mohd Noor. Synthesis and characterization of akermanite by Mechanical Milling and subsequent Heat Treatment. *Journal of Physic: Conference Series* vol 1082 (2018) pp. 012021.

10. T.T. Swe, H. Mohamad, <u>K.A. Shariff</u>, A.F.M. Noor, K.Ishikawa, A.A. Thant. Synthesis and characterization of bioactive Quaternary Silicate Gel-glasses. *Journal of Physic: Conference Series* vol 1082 (2018) pp. 012070.

11. Muhammad Syahir Juhari, Lynette Wei Ling Chin, Abdul Rashid Jamaludin<u>, Khairul Anuar</u> Shariff, Shah Rizal Kasim. High Solar reflectance of ceramic tiles engobe. *AIP Conference Proceedings* vol 2068 (2019) pp. 020087.

12. Thet Thet Swe, Hasmaliza Mohamad, <u>Khairul Anuar Shariff</u>, Aye Aye Thant. Fabrication of sol-gel derived new quaternary silicate Bioglass S55P4. *AIP Conference Proceedings* vol 2068 (2019) pp. 020070.

13. Ashiru Sani, Mohd Rosli Hasan, <u>Khairul Anuar Shariff</u>, Ali Jamshidi, Ali Huddin Ibrahim, Sharvin Poovaneshvaran. Engineering and microscopic characteristics of natural rubber latex modified binders incorporating silane additive. *International Journal of Pavement Engineering*. (doi: https://doi.org/10.1080/10298436.2019.1573319).

14. Hossein Mohammadi, Myat Myat-Htun, Yanny Marliana Baba Ismail, <u>Khairul Anuar</u> <u>Shariff</u>, Ahmad Fauzi Mohd Nor. Structural, physicomechanical, and in vitro biodegradation studies on Sr-doped bioactive ceramic. *Ceramic International* vol 45 (11) (2019) pp. 14090-14097.

Hossein Mohammadi, Yanny Marliana Baba Ismail, <u>Khairul Anuar Shariff</u>, Ahmad Fauzi
Mohd Noor. Effect of substitutional Strontium on Mechanical Properties of Akermanite Ceramic
Prepared by Solid-State Sintering. *Materials Today: Proceedings* vol 17 (2019) pp. 929-936.

16. Thet Thet Swe, <u>Khairul Anuar Shariff</u>, Ahmad Fauzi Mohd Noor, Kunio Ishikawa, Hasmaliza Mohamed. Effect of silver on the apatite formation of Bioactive Silicate Glass. *Materials Today: Proceedings* vol 17 (2019) pp. 884-888.

17. Thet Thet Swe, <u>Khairul Anuar Shariff</u>, Ahmad Fauzi Mohd Noor, Kunio Ishikawa, Hasmaliza Mohamed. Effect of aging time on the crystals structure of new quaternary silicate gelglasses. *Materials Today: Proceedings* vol 17 (2019) pp. 1668-1672.

18. Ashiru Sani, Mohd Rosli Mohd Hasan, <u>Khairul Anuar Shariff</u>, Sharvin Poovaneshvaran, Ilham Ibrahim. Morphological Identification of Latex Modified Asphalt Binder Prepared with Surfactants. *AWAM International Conference on Civil Engineering* (2019) pp. 1175-1185.

Haifaa' Auni Mohammad Zaki, <u>Khairul Anuar Shariff</u>, Mohamad Hafizi Abu Bakar,
Mohamad Nurul Azmi. Effect of Different Granular Size on the Properties of Porous β-Tricalcium
Phosphate Foam Granular Cements. *Key Engineering Materials* vol. 829 (2020) pp. 23-27.

20. Mohamad Hafizi Abu Bakar, Pui Yee Lee, Mohamad Nurul Azmi, Nurul Syifa'Lotfiamir, Mohamad Shamil Faris Mohamad, Nor Shafiqah Nor Shahril, <u>Khairul Anuar Shariff</u>, Harisun Ya'akob, Khalijah Awang, Marc Litaudon. In vitro anti-hyperglycemic, antioxidant activities and intestinal glucose uptake evaluation of Endiandra kingiana extracts. *Biocatalysis and Agricultural Biotechnology* vol. 25 (2020) pp. 101594.

- 21. Thet Thet Swe, <u>Khairul Anuar Shariff</u>, Hasmaliza Mohamad, Kunio Ishikawa, Koichiro Hayashi, Mohamad Hafizi Abu Bakar. Behavioural response of cells and bacteria on single and multiple doped Sr and Ag S53P4 sol-gel bioglass. *Ceramic International* (2020) <u>https://doi.org/10.1016/j.ceramint.2020.04.094</u>
- Thet Thet Swe, Hasmaliza Mohamad, <u>Khairul Anuar Shariff.</u> Effect of SrO Doping on Structural and Morphological Properties of Sol-Gel Derived Bioglass. *Malaysian Journal of Microscopy* Vol. 19 (1) (2020) pp. 1-7.
- 23. Nur Atikah Ab. Ghani, Zuryati Ab-Ghani, Yanny Marliana Baba Ismail, <u>Khairul Anuar</u> <u>Shariff</u>, Ahmad Nazeer Che Mat, Zaihan Ariffin, Tang Liszen, Ahmad Fauzi Mohd Noor. Non-aqueous sol-gel derived calcia partially stabilized zirconia: Synthesis and characterizations. Malaysian Journal of Microscopy Vol. 16 (1) (2020) pp. 67-74.
- 24. Ashiru Sani, Mohd Rosli Hasan, <u>Khairul Anuar Shariff</u>, Ali Jamshidi, Sharvin Poovaneshvaran, Khairul Anuar Shahid. Physico-Mechanical and Morphological Properties of Wax Latex- Modified Asphalt Binder. Iranian Journal of Science and Technology, Transactions of Civil Engineering (2020) <u>https://doi.org/10.1007/s40996-020-00422-9</u>
- Shariff, Khairul Anuar, Muhammad Syahir Juhari, Lynette Wei Ling Chan, and Shah Rizal Kasim. "Effect of Different Firing Temperature on Thermal Conductivity of Ceramic Tiles." Materials Science Forum 1010 (September 2020): 665–71. <u>https://doi.org/10.4028/www.scientific.net/msf.1010.665</u>.
- 26. Shariff, Khairul Anuar, Mohamad Hafizi Abu Bakar, and Arief Cahyanto. "Behavior of Osteoclast Cells Response on Dicalcium Phosphate Dihydrate Layer-Coated β-Tricalcium Phosphate Granular." Materials Science Forum 1010 (September 2020): 549–54. <u>https://doi.org/10.4028/www.scientific.net/msf.1010.549</u>.

- Thet, Thet Swe, Hasmaliza M. Mohamad, and <u>Khairul Anuar Shariff</u>. "Effect of Sr on the Bioactivity of Sol-Gel Derived New Silicate Bioglass S55P4." Materials Science Forum 1010 (September 2020): 613–19. <u>https://doi.org/10.4028/www.scientific.net/msf.1010.613</u>.
- Uwanuakwa, Ikenna D.; Ali, Shaban I.A.; Hasan, Mohd R.M.; Akpinar, Pinar; Sani, Ashiru; <u>Shariff, Khairul A</u>. 2020. "Artificial Intelligence Prediction of Rutting and Fatigue Parameters in Modified Asphalt Binders" *Appl. Sci.* 10, no. 21: 7764. <u>https://doi.org/10.3390/app10217764</u>
- 29. Sujon, Mamun Khan, Noor, Siti Noor Fazliah Mohd, Zabidi, Muhammad Azrul Bin, Shariff, <u>Khairul Anuar</u> and Alam, Mohammad Khursheed. "Bibliometric profiles of top 50 most cited articles on bioactive glass" *Biomedical Glasses* 6, no. 1 (2020): 70-84. https://doi.org/10.1515/bglass-2020-0007
- 30. Mohamad Hafizi Abu Bakar, <u>Khairul Anuar Shariff</u>, Joo Shun Tan, Lai Kuan Lee, Celastrol attenuates inflammatory responses in adipose tissues and improves skeletal muscle mitochondrial functions in high fat diet-induced obese rats via upregulation of AMPK/SIRT1 signaling pathways, European Journal of Pharmacology, Volume 883, 2020, 173371,

https://doi.org/10.1016/j.ejphar.2020.173371.

- 31. Ashiru Sani, <u>Khairul Anuar Shariff</u>, Mohd Rosli Mohd Hasan, Tomohiro Ando, Hiroki Imai, Behavioural interface-bonding and chemical characterization of silane and wax based additives on latex modified asphalt binders, International Journal of Adhesion and Adhesives, Volume 106, 2021, 102822, <u>https://doi.org/10.1016/j.ijadhadh.2021.102822</u>.
- 32. Wei, L.J., <u>Shariff, K.A</u>., Momin, S.A. *et al.* Self-setting β-tricalcium phosphate granular cement at physiological body condition: effect of citric acid concentration as an inhibitor. J Aust Ceram Soc (2021). <u>https://doi.org/10.1007/s41779-021-00575-4</u>

33. Hossein Mohammadi, Yanny Marliana Baba Ismail, Khairul Anuar Shariff, Ahmad-Fauzi Mohd Noor, Effect of strontium substitution on structural, sinterability, physicomechanical and biological properties of akermanite ceramic, Journal of the Mechanical Behavior of Biomedical Materials, Volume 116, 2021, 104379, https://doi.org/10.1016/j.jmbbm.2021.104379.

### **LIST OF PRESENTATIONS**

1. <u>S. Khairul Anuar Shariff</u>, M. Mariatti, A. Azizan, N. Chee Mang, W.T. Tham. Influence of amine adduct powder ratio on the properties of cured diglycidyl ether of bisphenol F (DGEBF) resin. 4<sup>th</sup> Colloquium on Postgraduate Research: National Postgraduate Colloquium on Materials, Minerals and Polymers (MAMIP 2010), Penang, Malaysia, 27-28 January, 2010.

2. <u>S. Khairul Anuar Shariff</u>, M. Mariatti, A. Azizan, N. Chee Mang, W.T. Tham. Effects of silver fillers shapes on the electrical and crosslink density of silver filled epoxy composites. National Symposium on Polymeric Materials 2010 (NSPM 2010), Langkawi, Kedah, Malaysia, 8-10 November, 2010.

3. <u>Khairul Anuar Shariff</u>, Kanji Tsuru, Kunio Ishikawa. Interconnected porous calcium phosphate forming cement consisting of  $\alpha$ -TCP foam granules and calcium phosphate acidic solution. 26<sup>th</sup> Annual Conference European Society of Biomaterials, Liverpool, United Kingdom, 31 August-3 September, 2014.

4. <u>Khairul Anuar Shariff</u>, Kanji Tsuru, Kunio Ishikawa. Fabrication and characterization of interconnected porous calcium phosphate forming cement consisting of  $\alpha$ -TCP foam granules. International Union of Materials Research Societies- The IUMRS International Asia, Fukuoka, Japan, 24-30 August, 2014.

5. <u>Khairul Anuar Shariff</u>, Kanji Tsuru, Kunio Ishikawa. Regulation of DCPD formation on β-TCP granular surface by exposing different concentration of acidic calcium phosphate solution. The 27<sup>th</sup> Symposium and Annual Meeting of International Society for Ceramics in Medicine (Bioceramics 27), Bali, Indonesia, 27-29 October, 2015.

6. Kanji Tsuru, <u>Khairul Anuar Shariff</u>, Riki Toita, Kunio Ishikawa. Introduction of interconnected porous structure to calcium phosphate forming bone cements. 64<sup>th</sup> General Session of the Japanese Societies for Dentals and Devices, Hiroshima, Japan, 4-5 October, 2014.

7. Kanji Tsuru, <u>Khairul Anuar Shariff</u>, Riki Toita, Kunio Ishikawa. Fabrication of bone cement with interconnected porous structure using  $\alpha$ -TCP foam granules. 27<sup>th</sup> Fall Meeting the Ceramic Society of Japan, Kagoshima, Japan, 9-11 September, 2014.

8. <u>Khairul Anuar Shariff</u>, Kanji Tsuru, Kunio Ishikawa. Fabrication of dicalcium phosphate dihydrate coated  $\beta$ -TCP granules for improved osteoconductivity. Kyushu University Midterm Presentation, Fukuoka, Japan, 5 February, 2015.

9. <u>Khairul Anuar Shariff</u>, Kanji Tsuru, Kunio Ishikawa. Calcium phosphate forming cement with interconnected porous structure. Japanese Society for Dental Materials and Devices, Kyushu Summer Seminar, Kagoshima, Japan, 8-9 August, 2014.

10. <u>Khairul Anuar Shariff</u>, Kanji Tsuru, Kunio Ishikawa. Micro-CT evaluation on osteoconductivity of dicalcium phosphate dehydrate coated  $\beta$ -TCP granule using experimental rats. Regional Conference on Materials and ASEAN Microscopy Conference (RCM& AMC) 2017, Penang, 12-13 December, 2017.

Haifaa' Auni Mohammad Zaki, <u>Khairul Anuar Shariff</u>, Mohamad Hafizi Abu Bakar,
Mohamad Nurul Azmi. Effect of Different Granular Size on the Properties of Porous β-Tricalcium
Phosphate Foam Granular Cements. 12<sup>th</sup> AUN/SEED-Net Regional Conference on Materials

Engineering (RCME) & 2019 International Symposium on Materials Science and Engineering (ISMSE 2019), Ho Chi Minh City, Vietnam.

### **ACHIEVEMENTS/RECOGNITIONS**

- 1. Reviewer: Journal of Australian Ceramic Society (ISI Journal –IF: 1.307 (2020))
- Advisory Board Committee for International Conference on Biomedical Engineering (2019 &2020)
- 3. Invited Lecture at Universiti Putra Malaysia (2017)
- 4. Invited Speaker for Asian Bioceramic Symposium, Indonesia (2018)
- 5. Member of X-Ray Application Malaysia Society (XAPP) (2017-now)
- 6. Committee member for Department of Standard Malaysia (Ceramic) (2018-now)

### **AWARDS**

- Best oral presentation for Kyushu University Midterm Presentation, Fukuoka, Japan, 5 February, 2015.
- Best Blending Learning Awards for School of Materials and Mineral Resources Engineering, Universiti Sains Malaysia. (EBB 212, EBB 344, EBB 250, EBS 110).
- Gold Medal European Exhibition of Creativity and Innovation 2020 (EUROINVENT 2020-IASI, ROMANIA)
- Travelling Award for AUN/SEED-Net Alumni Reunion (AUN/SEED-Net & JICA, Bangkok), 2020.

### PROFESSIONAL MEMBERSHIPS

- 1. Graduate Engineer (G.Eng.), Board of Engineers Malaysia (BEM) GE57357A
- 2. Ordinary Member Institute of Materials Malaysia (IMM) O-02520
- 3. Ordinary Member Tissue Engineering & Regenerative Medicine Society of Malaysia (TESMA)-

### TESMA/O/2016/0002

### ACADEMIC CONTRIBUTIONS

#### **TEACHING SUBJECT:**

- 1. EBB 212 Raw Materials and Structural Ceramics
- 2. EBB 113 Engineering Materials
- 3. EBB 344- Mechanical Metallurgy
- 4. EBB 155- Engineering Materials Introduction Laboratory
- 5. EBB 551- Material Laboratory
- 6. EBB 250- Computer Methods for Engineers
- 7. EBS 110- Engineering Drawings
- 8. EBB 317- Materials Processing Laboratory
- 9. EBB 513- Quality Management

### **RESEARCH GRANTS:**

1. <u>Principal Investigator</u>. Improvement of osteoconductivity of  $\beta$ -TCP granule by coating its surface with dicalcium phosphate dihydrate, RM 38650.40, USM Short Term Research Grant (15/1/2017-14/7/2019)

2. <u>**Principal Investigator.</u>** Behavioral response of bone-like cells on dicalcium phosphate dihydrate-coated  $\beta$ -tricalcium phosphate bioceramics granule, RM 140800.00, Fundamental Research Grant Scheme-Ministry of Higher Education (1/11/2020-31/10/2023)</u>

3. <u>**Principal Investigator**</u>. DEVELOPMENT OF BONE DEFECT MODELS USING 3D RECONSTRUCTION ALGORITHMS: POST COVID-19, RM 62120.00, AUN/SEED-Net International Research Grant (15/10/2020-15/12/2021)

4. <u>**Co-Investigator**</u>. Sol-gel derived Ag/Sr Bioglass for Bone Implant, RM 19995.00, AUN/SEED-Net International Research Grant (1/4/2017-31/5/2020)

5. <u>**Co-Investigator**</u>. Effect of Metallic Ion Therapeutic Agent (MITA) in Novel co-doped Akermanite Bioceramics on Response Mechanism of Osteoimmunomodulation in New Bone Formation, RM 96,990.00, Fundamental Research Grant Scheme-Ministry of Higher Education (15/8/2017-14/8/2020).

6. <u>**Co-Investigator**</u>. Development of Three-dimensional Gradient Scaffolds for Bone Tissue Engineering Applications, RM 65,000, USM Research University Grant, (1/1/2020-30/6/2023).

7. <u>**Co-Investigator**</u>. Assessments on Hydrophobic Modified Paper Mill Sludge Containing Cellulose and Calsium Carbonate for the Application as Alternative Modifier in Asphalt Mixture, RM 70,000, USM Research University Grant, (1/1/2020-30/6/2023).

8. <u>**Co-Investigator**</u>. Unravelling mechanistic crosstalk between immunometabolic regulation and metabolic pathway reorganization induced by celastrol in adipocyte-macrophage co-culture systems , RM 65,000, USM Research University Grant, (1/1/2020-31/12/2021).

9. <u>**Co-Investigator.**</u> Metabolic mechanism of inter-tissue crosstalk for excess nutrient flux in the biofluids of Type 2 Diabetes (T2D) individuals using an integrated multi-omics approach, RM 150,000, Fundamental Research Grant Scheme-Ministry of Higher Education (1/9/2019-31/8/2021).

10. <u>**Co-Investigator**</u>. Development and Characterization of Novel zirconiacalcia-(ZrCaO3)-bioglass for Dental, RM 52,000, USM Research University Grant, (1/6/2020-31/8/2024).

#### **SUPERVISION:**

#### **Graduate**

 Thet Thet Swe (PhD). Sputter Deposited Hydroxyapatite Thin Films to enhance osseointegration (On going- Co SV)

2. Hossein Mohammadi (PhD). Preparation and Characterzation of a Novel Modified Silicate-based Scaffold for bone tissue repair application (**Graduated 2019- Co SV**)

3. Chuthatip Mangkonsu (PhD). Study of sintering of  $\beta$ -TCP by comparing between using CaHPO<sub>4</sub>.2H<sub>2</sub>O + hydroxyapatite as raw materials by microwave sintering (**On going- Co SV**)

4. Muhammad Syahir Juhari (M.Sc). Development of solar reflective ceramic tiles for cooling purposes (Graduated 2019- Co SV)

5. Ashiru Sani (PhD). Effects of Zycotherm and Gripper as anti-stripping in the rubberized foamed WMA Mixture Incorporating Lime Kiln Dust (**Graduated 2020- Co SV**)

**6**. Haifaa' Auni Mohamad Zaki (MSc-mix mode). Fabrication of porous beta-tricalcium phosphate foam granular cement (**Graduated 2018- Main SV**)

7. Nurul Zawani Zainal Abidin (MSc-mix mode). Influence of Acidic Calcium Phosphate Solution Concentration on the Properties of Dicalcium Phosphate Dihydrate Coated on  $\beta$ -Tricalcium Phosphate Pellets (**Graduated 2019 – Main SV**)

8. Anis Syamimi binti Johari (M.Sc.). Physical and mechanical properties of novel nano Zirconia Calcia for dental application (**On-going- Co SV**) 9. Nur Ain Adila binti Abd Wahab (M.Sc.). Preparation and Characterization of Zirconia Calcia Oxide (ZrCaO3) Using Bioglass for Dental Application (**On-Going- Co SV**)

10. Tuan Nur Izzah binti Tuan Ab Rashid (PhD). Mechanism of  $Ca^{2+}$  ion attachment on the cordierite for bioactivity improvement of cordierite-bioglass scaffold (**On-going- Co SV**)

11. Mamun Khan Sujon (PhD). Combined Application of Dental Pulp Stem Cell with 3D Biomaterial Scaffolds for Dental Pulp Tissue Regeneration (**On-going- Co SV**)

12. Nur Adila Amira Basry (PhD). Alkaline and heat treatments of biocompatible titanium alloy for surface modification (**On-going-Co SV**)

Daniel Chin Jie Yuan (M.Sc.). 3D Reconstruction and Visualization of Osferion Bone Void
Filling (On-going-Co SV)

14. Nurliyana Mohd Rosli (PhD). Development of Functional Akemanite Bioceramics by Recycling Dental Mould Waster Through Solid State Sintering (**On-going- Co SV**)

15. Ahmed Hafedh Mohammed Mohammed (PhD). Production and properties of bioactive ceramics, glass-ceramics and zirconia with additives for medical applications (**On-going- Main SV**)

16. Najib Muktar (M.Sc.). Effect of natural binders as alternative asphalt fillers on pavement strength. (**On-going- Co SV**)

17. Farrah Izzatul Ain Kamarudin. Preliminary study on bioceramics containing gallic acid.(Graduated 2020- Main SV)

#### **Undergraduate**

 Ooi Chia Ying. Fabrication and characterization of tri-layer lightweight ceramic tile (Completed-2017) 2. Nurul Asyiqin Binti Abdul Halim Hafiz. Fabrication of porous beta-tricalcium phosphate granules cements by using beta-tricalcium phosphate granules as starting materials (**Completed- 2017**)

3. Muhammad Syahir Bin Juhari. Prelimenary study on the fabrication and characterization of lightweight porcelain tiles via tri-layer pressing method (**Completed-2017**)

4. Lee Jia Sheng. Fabricatio and characterization of low thermal conductive glazed ceramic (Completed-2018)

5. Mohamad Fadhlin bin Mohamed Ariffin. Effect of acidic calcium phosphate solution concentration on the setting properties of porous  $\beta$ -tricalcium phosphate granular cement (**Completed-2018**)

6. Lim Jun Wei. Effect of Citric Acid Concentration on the Properties of β- Tricalcium Phosphate
Granular Cement (Completed-2019)

7. Nur Raihan Ridzwan. Fabrication and Characterization of Dicalcium Phosphate Dihydrate Layer-Coated β-Tricalcium Phosphate Pellets (**Completed-2019**)

8. Muhammad Azrin bin Abd Jamil. Effect of Various Parameters on the Black Coring Formation in ceramic tile (**Completed-2019**)

9. Samuel Edmund Theivendran. Alternative feldspar in ceramic tiles manufacturing process: A critical review (**Completed-2020**)

10. Mohammad Ikmal Fitri bin Mohammad. Osteoconductivity improvement of hydroxyapatite using dicalcium phosphate dihydrate coating technique: A critical review (**Completed-2020**)

#### **INTERNAL EXAMINER:**

1. Siti Ayuni Hamka (**M.Sc. Mix-mode**). Development of carbonate apatite scaffold for biomedical application. 2016

 2. Iliya Ezekiel (MSc) Pembangunan dan Pencirian Pelbagai Hidroksiapatit Karbonat Multidop (Mg, Si, Cu, Fe) melalui kaedah Nanoemulsion. 2018.

3. Khor Jia Yen (**M.Sc. Mix-mode**). Investigation of Surface Properties For Self-Cleaning Coating on Ceramic Wall. 2019

#### **REVIEWER (SELECTED):**

1. Sahar Vahabzadeh, Susmita Bose. Lithium Doped β-Tricalcium phosphate: Effects of Physical, Mechanical and *In Vitro* Osteoblast Cell-Material Interactions. Journal of Biomedical Materials Research: Part B- Applied Biomaterials (Manuscript ID: JBMR-B-15-0075)

2. Siti Hafizah Mohamad, Mohamad Al Amin Muhamad Nor. Effect of Na<sub>2</sub>O and K<sub>2</sub>O on the solubility and Chemical Properties of P<sub>2</sub>O<sub>5</sub>-CaO-Na<sub>2</sub>O-K<sub>2</sub>O-Al<sub>2</sub>O<sub>3</sub> glass. Proceeding of International Conference on X-Ray & Related Techniques in Research and Industry. (Manuscript ID: 978-3-0357-1029-8\_550)

3. Banjuraizah Johar, Tinesha a/p Selvaraj, Zainal Arifin Ahmad. Elemental, Thermal, And Structural Characterization of ZnO Doped 8 Mol% Yttria-Stabilized Zirconia (8YSZ) Ceramics. Proceeding of International Conference on X-Ray & Related Techniques in Research and Industry. (Manuscript ID: 978-3-0357-1029-8\_970)

4. I. Abdullahi, I. Zainol. Synthesis and characterization of novel chitosan-hydroxyapatites composites doped with zinc. Proceeding of International Conference on Advances in Mechanical Engineering 2017..(Manuscript ID: 978-3-0357-1029-8\_970)

5. Chung She Man, Weily Khoo, Lim Shing Chee, Mohd Faiz Zakaria, Koh Ching Theng. Strategy on the Production of Bead Free Electrospun Gelatin Scaffolds. Proceeding of International Conference on Advances in Mechanical Engineering (ICAME) 2017 (Manuscript ID: 234) 6. N.S. Mohamed, C.T. Koh. Preparation of Siam Weed Extracts. Proceeding of International Conference on Advances in Mechanical Engineering (ICAME) 2017 (Manuscript ID: 246)

7. K. Mohd, H. Mohamad. Effect of Milling Time to the Porous Oxide Based Cordierite. Proceeding of International Conference of Global Network for Innovative Technology (IGNITE) 2016 (Manuscript ID: 38)

8. MF Ab Rahman, ZA Ahmad, JJ Mohamed, MF Ain, M Ahmadipour and NA Rejab. Effect of glass addition on the phase formation, microstructures evolution and dielectric properties of CCTO ceramics for energy storage capacitor. Journal of Physics: Conference Series (Manuscript ID: 2017-01-03-1768)

9. Mazlam M.I, Ho. H.H., and A. Nurazreena. Fabrication and Characterisation of Gelatine/Hydroxyapatite Porous Scaffold. Journal of Physics: Conference Series (Manuscript ID: 2017-01-07-1701)

10. Siti Noorzidah Mohd Sabri, Rohaya Othman and Anuar Othman. Synthesis of Precipitated Calcium Carbonate at Low Temperature. Materials Today: Proceedings (Manuscript ID: Bio-CAM2017\_078-091\_9)

11. Siti Noorzidah Mohd Sabri , Rohaya Othman and Anuar Othman. Synthesis of Precipitated Calcium Carbonate at Low Temperature. Materials Today: Proceedings (Manuscript ID: Bio-CAM2017\_078-091\_9)

#### **CONSULTATION & TESTINGS (PROFESIONAL WORKS)**

1. 14. <u>Principal Investigator.</u> TGA-DTA analysis, RM 954, Jabatan Mineral Dan Geosains Malaysia (2017)

2. Principal Investigator. XRD and XRF analyses, RM 6500, Modhka Marine Sdn Bhd. (2018)

3. <u>Principal Investigator.</u> Water of plasticity + pH+ water absorption analyses, RM 7500, Modhka Marine Sdn Bhd. (2018)

4. Principal Investigator. XRD and XRF analyses, RM 2700, Modhka Marine Sdn Bhd. (2018)

5. Principal Investigator. XRD analysis, RM 350, Modhka Marine Sdn Bhd. (2019)

6. Principal Investigator. Consultation on Feldspar case, RM 800, Modhka Marine Sdn Bhd. (2019)

7. Principal Investigator. Pull Out Test, RM 1500, Persatuan Primatologi Malaysia (2019)

8. <u>Principal Investigator</u>. GI Steel Pipe, RM 950, Pusat Pengajian Kejuruteraan Elektrik dan Elektronik (2019)

9. <u>Principal Investigator</u>. Epoxy resin for coating, RM 950, Pusat Pengajian Kejuruteraan Elektrik dan Elektronik (2019)

10. <u>Principal Investigator</u>. Defect metal pipe, RM 950, Pusat Pengajian Kejuruteraan Elektrik dan Elektronik (2019)

11. <u>Principal Investigator</u>. Fiberglass epoxy coating, RM 950, Pusat Pengajian Kejuruteraan Elektrik dan Elektronik (2019)

12. <u>Principal Investigator.</u> Fiberglass sheet, RM 650, Pusat Pengajian Kejuruteraan Elektrik dan Elektronik (2019)

13. <u>Principal Investigator</u>. Epoxy coating, RM 950, Pusat Pengajian Kejuruteraan Elektrik dan Elektronik (2019)

14. <u>Principal Investigator</u>. Defect metal pipe, RM 1700, Pusat Pengajian Kejuruteraan Elektrik dan Elektronik (2019)

15. Principal Investigator. Plasticity of Clay, RM 2100, Modhka Marine Sdn Bhd. (2020)

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**2.** <u>Principal Investigator.</u> (2020) BONE FORMATION AND ANTIBACTERIAL ACTIVITY ON MULTIPLE DOPED SR AND AG S53P4 SOL-GEL BIOGLASS (**Copyright-CRLY00025036**)

3. <u>Co-Investigator.</u> (2021) Methods of 3D Reconstruction and Visualization of OSferion Bone Void Filingthods of 3D Reconstruction and Visualization of OSferion Bone Void (**Notification of copyright works-LY2021000064**)

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