YANNY MARLIANA BINTI BABA ISMAIL
LECTURER

ABOUT ME

Date of birth: 12th September 1986

Address: School of Materials & Mineral Resources Engineering, USM Engineering Campus, Universiti Sains Malaysia, 14 300, Nibong Tebal, Pulau Pinang, Malaysia.

Telephone: 019-7891209 (mobile), 04-599 6154 (office)

Email: yannymarliana@usm.my; dryannymarliana2016@gmail.com

Current position: Lecturer DS51

Expertise: Biomaterials and Nanotechnology

Marital Status: Single

EDUCATION

BACHELOR OF ENGINEERING (HONOURS) (MATERIALS ENGINEERING) (2005/2009)
CGPA: 3.38
UNIVERSITI SAINS MALAYSIA

MASTER OF SCIENCE (MATERIALS ENGINEERING) (2009/2011)
MAJOR: BIOCERAMICS
UNIVERSITI SAINS MALAYSIA

DOCTOR OF PHILOSOPHY (2012/2016)
MAJOR: BIOMEDICAL ENGINEERING
KEELE UNIVERSITY, UNITED KINGDOM

ACHIEVEMENT

INVITED SPEAKER
EVENT: INTERNATIONAL SCIENTIFIC DEBATES FOR GLOBAL WEEK
NOTTIGHAM TRENT UNIVERSITY (NTU), UNITED KINGDOM; 25th FEBRUARY-2nd MARCH 2018.

WORKING EXPERIENCE

RESEARCH ASSISSTANT (MAY- JULY 2007)
SCHOOL OF MATERIALS & MINERAL RESOURCES ENGINEERING, USM, ENGINEERING CAMPUS, PENANG, MALAYSIA.

INDUSTRIAL TRAINEE (APRIL- JULY 2008)
PENCHEM TECHNOLOGIES, PENANG, MALAYSIA.

TUTOR/ LAB CO-ORDINATOR (JULY-DEC 2009)
SCHOOL OF MATERIALS & MINERAL RESOURCES ENGINEERING, USM, ENGINEERING CAMPUS, PENANG, MALAYSIA.

COLLABORATION EXPERIENCE

2018-Present
NOTTINGHAM TRENT UNIVERSITY
NOTTINGHAM, ENGLAND, UNITED KINGDOM.

2017-Present
CERAMIC RESEARCH COMPANY (CRC)
KLANG, SELANGOR, MALAYSIA.

2012-2016
LUCIDEON (PREVIOUSLY KNOWN AS CERAM)
STOKE-ON-TRENT, ENGLAND, UNITED KINGDOM.

NEWCASTLE UNIVERSITY
NEWCASTLE-UPON-TYNE, ENGLAND, UNITED KINGDOM.

UNIVERSITY OF EDINBURGH
EDINBURGH, SCOTLAND, UNITED KINGDOM.

UNIVERSITY OF MANCHESTER
MANCHESTER, ENGLAND, UNITED KINGDOM.

AWARDS

[1] **INTERNATIONAL INVENTION, INNOVATION AND TECHNOLOGY EXHIBITION (ITEX), KUALA LUMPUR CONVENTION CENTRE, 20th-22nd MAY2011.**
INVENTION: NANO-CHARM: NANOSTRUCTURED CARBONATED HYDROXYAPATITE FOR BIOMEDICAL APPLICATIONS.
INVESTIGATOR: AHMAD FAUZI MOHD NOOR; YANNY MARLIANA BABA ISMAIL
AWARD: BRONZE MEDAL

[2] **PENCIPTA 2011, KUALA LUMPUR CONVENTION CENTRE, 13th -15th SEPTEMBER 2011**
INVENTION: NANO Mg-Mn FERRITE OF 3 IN 1 MINIATURIZATION OF ANTENNA APPLICATION.
INVESTIGATOR: AHMAD FAUZI MOHD NOOR; RADZALI OTHMAN, SRIMALA SREEKANTAN,WIDAD ISMAIL, NILAR LWIN, YANNY MARLIANA BABA ISMAIL
AWARD: SILVER MEDAL

RESEARCH FUNDING

2017-2020 (Principal Investigator)
Grant by: Fundamental Research Grant Scheme (FRGS)
Project Title: "Understanding the mechanism of multi-doping ions in Carbonated Hydroxyapatite (CHA) Scaffolds to induce rapid bone formation"

2017-2020 (Co-investigator)
Grant by: Fundamental Research Grant Scheme (FRGS)
Project Title: "Effect of Metallic Ion Therapeutic Agent (MITA) in Novel co-doped Akermanite Bioceramics On Response Mechanism of Osteoimmunomodulation In New Bone Formation"

2017-2020 (Co-investigator)
Grant by: ASEAN University Network/Southeast Asia Engineering Education Development Network (AUN/SEED-Net)
Project Title: "The fabrication of Akermanite scaffold by coating Carbonated Hydroxyapatite"

2017-2019(Principal Investigator)
Grant by: USM SHORT-TERM GRANT
Project Title: "Multi-functional porous composite scaffolds mimicking human bone".

RESEARCH PUBLICATIONS

Journals:

[1] Muhammad Syazwan M.N. and **Yanny Marliana B.I.**, The influence of simultaneous divalent cations (Mg^{2+}, Co^{2+} and Sr^{2+}) substitution on the physico-chemical properties of carbonated hydroxyapatite. *Ceramics International* (Recently accepted in April 2019).

[2] Hossein Mohammadi, Myat Myat-Htun, **Yanny Marliana Baba Ismail**, Khairul Anuar Shariff, Ahmad-Fauzi Mohd Noor, Structural, physicomechanical, and in vitro biodegradation studies on Sr-doped bioactive ceramic. *Ceramics International* (Recently accepted in April 2019).

[3] Muhammad Syazwan Mohd Noor, Ahmad-Fauzi Mohd Noor, **Yanny Marliana Baba Ismail**, The Effect of Sintering Aid on Fabrication of Three-dimensional Carbonated Hydroxyapatite Porous Scaffolds. *Key Engineering Materials* (Recently accepted in March 2019).

[4] Muhammad Syazwan Mohd Noor, Ahmad-Fauzi Mohd Noor, **Yanny Marliana Baba Ismail**, Fabrication of Low Temperature Carbonated Hydroxyapatite Porous Scaffolds for Bone Tissue Engineering Applications. *Key Engineering Materials* (Recently accepted in January 2019).

[5] Iliya Ezekiela, Shah Rizal Kasim, **Yanny Marliana Baba Ismail**, Ahmad-Fauzi Mohd Noor, Nanoemulsion synthesis of carbonated hydroxyapatite nanopowders: Effect of variant CO3 2−/PO4 3− molar ratios on phase, morphology, and bioactivity. *Ceramics International 44* (2018): 13082-13089.

[6] **Yanny Marliana Baba Ismail**, Yvonne Reinwald, Ian Wimpenny, Oana Bretcanu, Kenneth Dalgarno, Alicia J El Haj, The Influence of Scaffold Designs on Cell Seeding Efficiency in Establishing A Three-Dimensional Culture. *Journal of Physics: Conf. Series 1082* (2018) 012072.

[7] Muhammad Syazwan M.N., Ahmad-Fauzi M.N. and **Yanny Marliana B.I**, Co-Sr doped carbonated hydroxyapatite: A biomaterial with enhanced mechanical and bioactivity properties. *Journal of Physics: Conf. Series 1082* (2018) 012076.

[8] M. Chuthathip, M. N. Ahmad-Fauzi , B. I. Yanny-Marliana, S. Khairul- Anuar, K. Masakazu, L. Banhan, Effect of Magnesium Oxide on Physical and Biological Properties in β-tricalcium Phosphate Ceramic. *Journal of Physics: Conf. Series 1082* (2018) 012026.

[9] Ahmad-Fauzi Mohd Noor, **Yanny-Marliana Baba Ismail**, Masakazu Kawashita, Aye Aye Thant, Myat Myat-Htun, Effects of Milling Speed and Sintering on the Formation of Akermanite (Ca2MgSi2O7) Bioceramics. *Journal of Physics: Conf. Series 1082* (2018) 012074.

[10] Hossein Mohammadi, **Yanny Marliana Baba Ismail**, Khairul Anuar Bin Shariff, Ahmad-Fauzi Mohd Noor, Synthesis and Characterization of Akermanite by Mechanical Milling and Subsequent Heat Treatment. *Journal of Physics: Conf. Series 1082* (2018) 012021.

[11] **Yanny M. Baba Ismail,** Ian Wimpenny, Oana Bretcanu, Kenneth W. Dalgarno, Alicia J. El Haj, Development of multi-substituted hydroxyapatite nanopowders as biomedical materials for bone tissue engineering applications. *Journal of Biomedical Materials Research Part A* (2017) 105(6):1775-1785.

[12] **Yanny Marliana Baba Ismail,** Ana Marina Ferreira, Oana Bretcanu, Kenneth W. Dalgarno, Alicia J. El Haj, Polyelectrolyte multi-layers assembly of SiCHA nanopowders and collagen type I on aminolysed PLA films to enhance cell-material interactions, Colloids and Surfaces B: Biointerfaces (2017) 445-453.

[13] **Yanny Marliana Baba Ismail**, Habsah Haliman, Ahmad Azmin Mohamad, Measuring solid gel-polymer electrolyte properties based on hydroponics polymer gel for Zn-MnO_2 alkaline batteries, International Journal of Electrochemical Science 7(2012) 3555-3566.

[14] **Yanny-Marliana B.I** and Ahmad-Fauzi M.N., Effect of a Novel Approach of Sintering on Physical Properties of Carbonated Hydroxyapatite, Journal of Materials Science and Engineering B1 (2011) 157-163.

[15] N.H. Khalid, **Y.M. Baba Ismail**, A.A. Mohamad, $ZnCl_2$- and NH_4Cl-Hydroponics Gel Electrolytes for Zinc-Carbon Batteries, Journal of Power Sources 176 (2008) 393-395.

Proceedings:

[1] **Yanny M. Baba Ismail,** Oana Bretcanu, Kenneth W. Dalgarno, Alicia J. El Haj, 2014. Synthesis and *in vitro* biocompatibility of multi-substituted hydroxyapatite for bone tissue engineering applications. *European Cells and Materials*, 8 (4): 4.

[2] Yvonne Reinwald, Pierre O. Bagnnaninchi, Ying Yang**, Yanny M. Baba Ismail,** Alicia J. El Haj, 2016. Online monitoring of mechanical properties of three-dimensional tissue engineered constructs for quality assessment. *Proc. SPIE 9710, Optical Elastography and Tissue Biomechanics* III, 971007.

[3] **YM Baba Ismail**, Y Reinwald, O Bretcanu, K Dalgarno, AJ El Haj, 2016. Designs of three-dimensional printed scaffolds promote formation of vascularized engineered bone. *European Cells and Materials*, 31(1): 144.

[4] Yvonne Reinwald, Pierre O. Bagnnaninchi, Wesam Gamal, Ying Yang**, Yanny M. Baba Ismail,** Alicia J. El Haj, 2016. Online monitoring of mechanical properties of three-dimensional tissue engineered constructs for quality assessment. *European Cells and Materials*, 31(1): 243.

RESEARCH PRESENTATIONS

National:

[1] **Yanny-Marliana B.I** and Ahmad-Fauzi M.N (2010), Effect of a Novel Approach of Sintering on Bioactivity of Carbonated Hydroxyapatite, *Merging Biomaterials Expertise Towards Health Sustainability, Kelantan, Malaysia, October 2010.*

[2] **Yanny-Marliana B.I** and Ahmad-Fauzi M.N (2010), Bioactivity of Carbonated Hydroxyapatite, *19th Scientific Conference of the Electron Microscopy Society of Malaysia, Langkawi, Malaysia, December 2010*.

[3] **Yanny Marliana Baba Ismail**, Yvonne Reinwald, Ian Wimpenny, Oana Bretcanu, Kenneth Dalgarno, Alicia J El Haj, The Influence of Scaffold Designs on Cell Seeding Efficiency in Establishing A Three-Dimensional Culture. *Regional Conference on Materials and ASEAN Microscopy Conference, Penang, Malaysia, December 2017.*

International:

[1] **Yanny-Marliana B.I** and Ahmad-Fauzi M.N (2011), Physical and Mechanical Properties of Carbonated Hydroxyapatite Ceramics, *International Conference on Materials, Yogyakarta, 2-3 February 2011* (Oral).

[2] **Yanny M. Baba Ismail,** Oana Bretcanu, Kenneth W. Dalgarno, Alicia J. El Haj, 2014. Physico-chemical properties and in vitro biological assessment of multi-substituted hydroxyapatite powders. *Tissue Engineering & Regenerative Medicine International Society*, Genova, Italy, June 2014 (Poster).

[3] **Yanny M. Baba Ismail,** Oana Bretcanu, Kenneth W. Dalgarno, Alicia J. El Haj, 2014. Synthesis and in vitro biocompatibility of multi-substituted hydroxyapatite for bone tissue engineering applications. *Tissue and Cell Engineering Society*, Newcastle-upon-tyne, United Kingdom, July 2014 (Oral).

[4] **Yanny M. Baba Ismail,** Oana Bretcanu, Kenneth W. Dalgarno, Alicia J. El Haj, 2014. Synthesis and in vitro biocompatibility of carbonated hydroxyapatite for bone tissue engineering applications. *European Society of Biomaterials*, Liverpool, United Kingdom, August 2014 (Poster).

[5] **Yanny M. Baba Ismail**, Oana Bretcanu, Kenneth W. Dalgarno, Alicia J. El Haj, 2014. Nanoscale multi-substituted hydroxyapatite particles for bone tissue engineering applications. *European Materials Research Society*, Warsaw, Poland, September 2014 (Oral).

[6] **Yanny M. Baba Ismail,** Oana Bretcanu, Kenneth W. Dalgarno, Alicia J. El Haj, 2014. Nanoscale multi-substituted hydroxyapatite particles for bone tissue engineering applications. *Malaysian Tissue Engineering and Regenerative Medicine Scientific Meeting*, Kuala Lumpur, Malaysia, September 2014 (Poster).

[7] Yvonne Reinwald, Pierre O. Bagnnaninchi, Ying Yang**, Yanny M. Baba Ismail,** Alicia J. El Haj, 2016. Online monitoring of mechanical properties of three-dimensional tissue engineered constructs for quality assessment. *SPIE Optical Elastography and Tissue Biomechanics* III, San Francisco, California, United States, February 2016 (Oral).

[8] **YM Baba Ismail**, Y Reinwald, O Bretcanu, K Dalgarno, AJ El Haj, 2016. Designs of three-dimensional printed scaffolds promote formation of vascularized engineered bone. *Tissue Engineering & Regenerative Medicine International Society*, Uppsala, Sweden, June 2016 (Oral).

[9] Muhammad Syazwan Mohd Noor, Ahmad-Fauzi Mohd Noor, **Yanny Marliana Baba Ismail**, Fabrication of Low Temperature Carbonated Hydroxyapatite Porous Scaffolds for Bone Tissue Engineering Applications. *Asian Bioceramic Symposium,* Bandung, September 2018 (Oral).

[10] Muhammad Syazwan Mohd Noor, Ahmad-Fauzi Mohd Noor, **Yanny Marliana Baba Ismail**, The Effect of Sintering Aid on Fabrication of Three-dimensional Carbonated Hydroxyapatite Porous Scaffolds. *International Conference of Key Engineering Materials,* Oxford, United Kingdom, March 2019 (Oral)

RESEARCH SUPERVISION

Main Supervision:

[1] MA MYAT MYAT HTUN, PhD, "Preparation and Characterization of Calcium Phosphate Scaffolds for Bone Tissue Engineering".

[2] MUHAMMAD SYAZWAN BIN MOHD NOOR, Master of Science, "Development of Carbonated Hydroxyapatite scaffolds for Biomedical Applications".

Co-Supervision:

[1] HOSSEIN MOHAMMADI, PhD, "Preparation and Characterization of a Novel Modified Silicate-based Scaffold for Bone Tissue Repair Application".

[2] CHUTHATHIP MANGKONSU, PhD, "Study on sintering of B-TCP by comparing between using $CaHPO_4$ + HA and $CaHPO_4.2H_2O$+Ca_{10} $(PO_4)_6(OH)_2$ as raw materials by microwave sintering".

[3] ILIYA EZEKIEL, Master (Research), "Synthesis and Characterization of Multidoped (Mg, Si, Cu, Fe) Carbonated Hydroxyapatite Via Nanoemulsion Route".

PROFESSIONAL

[1] Registered Graduate Engineer under Board of Engineers Malaysia (BEM).

[2] Life Member of Microscopy Society Malaysia (MSM).

SKILLS

WORK

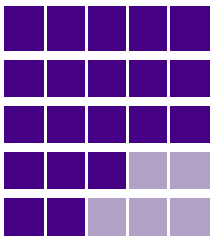
MICROSOFT

STATISTICAL SOFTWARE

AUTOCAD/AUTODESK

MATLAB

VISUAL BASIC



PERSONAL

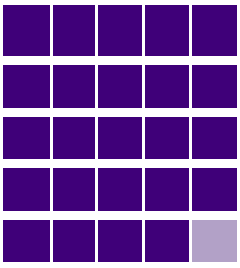
COMMUNICATION

ORGANIZATION

TEAM PLAYER

CREATIVITY

SOCIAL



COMMUNITY SERVICE

[1] Volunteer for The BING BANG UK Young Scientists and Engineers Fair; Birmingham, United Kingdom; March 2015.

[2] Demonstrator for Outreach Programme; Macclesfield, United Kingdom; May 2014.

[3] Blogger for Healthcare Engineering and Regenerative Therapies (HEART) website; April 2014-March 2015.

[4] Advisor of Science Project for Kolej Mara Kulim Innovative Exhibition Fair 2017/2018.

[5] Guest Writer for Simply Speaking USM Research Magazine 2019.

REFEREES

[1] Assoc. Prof. Ir. Dr. Syed Fuad Saiyid Hashim

School of Materials & Mineral Resources Engineering, Universiti Sains Malaysia.

mrsyfuad@usm.my

[2] Professor Ahmad Fauzi Mohd Noor

School of Materials & Mineral Resources Engineering, Universiti Sains Malaysia.

srafauzi@usm.my

[3] Professor Abd Karim Alias

Centre of Development of Academic Excellence, Universiti Sains Malaysia.

akarim@usm.my

[4] Professor Kenneth Dalgarno

School of Mechanical & Systems Engineering, Newcastle University, United Kingdom.

kenny.dalgarno@newcastle.ac.uk

[5] Dr. Yvonne Reinwald

School of Science & Techmology, Nottingham Trent University, United Kingdom.

yvonne.reinwald@ntu.ac.uk

[6] Dr. Ian Wimpenny

Institute of Population Health, University of Manchester, United Kingdom.

ian.wimpenny@manchester.ac.uk