NAME: ABU SAMAH, ZURUZI (A. S. ZURUZI)
Citizenship: Singapore citizen by birth

CURRENT POSITION:
Professor, Mechanical Engineering Department
Alfaisal University, Kingdom of Saudi Arabia

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A. EDUCATIONAL QUALIFICATIONS

1. Graduate Certificate in Education (International Education, Administration and Leadership), University of Illinois Urbana-Champaign, 2023
2. Ph.D.(Materials), University of California at Santa Barbara, U.S.A., 2005 (Advisor: Professor Noel MacDonald, NAE)
3. B.A.Sc.(Second Upper, Honours), Nanyang Technological University, Division of Materials Engineering, Singapore, 1997

B. HONORS

1. Emerging Leaders Alliance Program, The Minerals, Metals and Materials Society, USA (TMS) 2016
2. Special Mention, Teaching Excellence Award, Universiti Teknologi Brunei, 2016
3. IES Outstanding Volunteer Award, Institution of Engineers, Singapore, 2014
4. Platinum Medal (Senior Category), Singapore Chemical Science Fair, Student Advisor, 2008
5. Graduate Student Award (Silver), Materials Research Society (USA), 2004
6. International Fellowship, Agency for Science, Technology and Research (A*STAR), 2002-2004
7. Graduate Research Assistantship, University of California at Santa Barbara, U.S.A.
8. Regents Scholarship, University of California at Santa Barbara, U.S.A.

C. ACADEMIC EXPERIENCE

1. Professor, Mechanical Engineering Programme Area, Universiti Teknologi Brunei, Mechanical Engineering Programme Area, Brunei Darussalam
2. Senior Lecturer, Engineering Product Development Pillar, Singapore University of Technology and Design, Singapore
3. Senior Lecturer, School of Applied Science, Temasek Polytechnic, Singapore.
4. Senior Lecturer, School of Engineering, Nanyang Polytechnic, Singapore
5. Graduate Research Assistant, Materials Department, University of California at Santa Barbara, U.S.A.

D. INDUSTRIAL RESEARCH EXPERIENCE

1. Senior Engineer, Intel Corporation, U.S.A.
2. Post-Doctoral Fellow, Agilent Laboratories, U.S.A.
3. Research Officer, Institute of Materials Research and Engineering, Singapore

E. COMPETITIVE RESEARCH GRANTS

PI denotes Principal Investigator and amounts indicated are in **Singapore dollars (SGD).**

1. Design, fabrication and testing of a aqueous ozone generator, **Alfaisal University, Kingdom of Saudi Arabia**. $18,000. February 23 to August 24.
2. Soft Fluidics: Explorative Study of agar with built-in-fluidics to study plants, **Alfaisal University, Kingdom of Saudi Arabia**. $18,000.
3. Corrosion studies of active defence platforms, **Ministry of Defense, Brunei**. $120,000.
4. Development of coatings for fabric cooling: Synthesis and characterization of phase change nanocomposites, **Universiti Teknologi Brunei Research Fund**. $8,000 (10/2015 to 10/2016) (PI)
5. Development of nanocomposites for pressure sensing, **Intelligent Mobility Pte Ltd**, $30,000 (3/2013 to 2/2015) (PI)
6. All-Dielectric Terahertz Metamaterial Based Gas Detectors (IGDS S14 02021) $48,000, **Ministry of Defense (Singapore) through Temasek Laboratories** (6/2014 to 5/2015) (PI)
7. Carbon nanotube interconnect structures for microelectronic applications, **National Research Foundation (Singapore)** – Translational Research and Development Grant, $342,000, 12/2010 to 11/2012 (PI)
8. Wearable Pressure Sensors for Rehabilitation of Patients after Stroke, **Ministry of Education (Singapore)** – Innovation Fund, $567,650,1/2010 to 12/2012 (Co-PI)
9. 3-Dimensional Hybrid Micro/Nano Structures for Energy Harvesting, **National Research Foundation (Singapore)** – Proof of Concept Grant, $250,000, 5/2010 to 5/2011 (Co-PI)

10. Flexible Pressure Sensors Using Area Array Nanocomposites, **National Research Foundation (Singapore)** – Proof of Concept Grant, $250,000, 3/2009 to 2/2010 (PI)
11. Design and development of dye-sensitised solar cell with improved efficiency, **TOTE Fund (Singapore)**. $447,500, 9/2008 to 8/2010 (Collaborator)
12. Development of an ultra-senstive and flexible pressure sensor, **Singapore Totalisator Board**, $98,500 6/2008 to 5/2010 (PI)
13. Development of ultra-sensitive gas detection system using integrated metal oxides, **Singapore Totalisator Board**, $585,000 9/2007 to 6/2009 (PI)

F. PEER-REVIEWED JOURNAL PUBLICATIONS (within past 6 years)

[#] indicates corresponding author, ***** indicates my undergraduate student, [+] indicates my graduate student

1. Omar El Arwadi*, Abu Samah Zuruzi[#], Towards bulk nanobubble generation: Development of a bulk nanobubble generator based on hydrodynamic cavitation, ***International Journal of Recent Advances in Mechanical Engineering***, **2022**, 11 (2).

2. Azlan Abdul Aziz*****, Kai Boon Lim*****, Ena Kartina Abdul Rahman, Muhammad Hanafiah Nurmawati, Abu Samah Zuruzi[#], Agar with embedded channels to study root growth, ***Scientific Reports***, **2020**, 10 (1), 1-12.

3. K. Siti[+], Denni Kurniawan[#], AB Muhammad Saifullah, Abu Samah Zuruzi, Biochar as a Conducting Filler to Enhance Electrical Conduction Monitoring for Concrete Structures, ***Key Engineering Materials***, **2020**, 847, 149-154.

4. Kim Shyong Siow[#], ST Chua, BD Beake, Abu Samah Zuruzi, Influence of sintering environment on silver sintered on copper substrate, ***Journal of Materials Science: Materials in Electronics, 2019,*** 30 (6), 6212-6223.

5. Obiwulu Solomon Uche[+], Yunus Esa M., Ibrahim Fahmi, Abu Samah Zuruzi[#], Sustaining Innovation: Creativity among Employees of Small and Medium-Sized Enterprises and Students in Higher Education Institutions in Brunei Darussalam, ***Journal of Open Innovation: Technology, Market, and Complexity, 2019,*** 5 (2), 25.

6. Isa Zubaidah[+], Abdullah Norfatriah[+], Serbini Noorul Zatul Amali[+], Abu Samah Zuruzi[#], Preparation and Behavior of Bamboo Fiber-Reinforced Polydimethylsiloxane Composite Foams during Compression, ***Fibers*** 6 (4), 91

7. Abu Samah Zuruzi[#], Tuah Mohammad Haffiz[+], Daruis Affidah[+], Abdullah Norfatriah*****, Muhammad Hanafiah Nurmawati ***Materials and Design***, **2017**, 132, 449-458.

8. Abu Samah Zuruzi[#], Dong Zhi Chi, Dominique Mangelinck, Nitrogen enhanced thermal stability of nickel monosilicide, ***Physica Status Solidi A: Applications and Materials Science,*** **2017**, 214(5), 1600710.

9. Abu Samah Zuruzi[#], Muhammad Hanafiah Nurmawati, Jeffrey Weng Chye Ho and Zhong Chen, In-place synthesis of Pt-modified brookite TiO_2 micrometre-sized sensing elements via wet oxidation of Ti/Pt/Ti films on glass, ***Sensor Letters***, **2017**, 15(5), 402 – 406.

10. Abu Samah Zuruzi[#], Majid Siti Mazulianawati, Effect of Ligament Morphology on Electrical Conductivity of Porous Silver, ***Journal of Electronic Materials***, **2016**, 45, 6113

11. Morsidi, Maziri, Zuruzi, A. S. [#], Towards Application of Aluminum Alloy 6082 For Harsh Environment Sensing in Oil and Gas Installations: An Empirical Model for Low Temperature Creep. MRS Advances, Available on CJO 2016 doi:10.1557/ adv.2016.283

G. CONFERENCE PUBLICATIONS (within past 6 years)

*****indicates my undergraduate student, $^{+}$indicates my graduate student

1. Abu Samah Zuruzi, Al Yamamah University Youth Forum 2023, Enabling Industry 4.0: From micromachining to smart sensors, 19-20 March 2023, Riyadh, Kingdom of Saudi Arabia.

2. Abu Samah Zuruzi, Does Interdisciplinarity of Materials Science Programs Matter? Trends from ABET Accreditation Data, 6th International Conference on Advanced Research in Education, Teaching and Learning, 29 - 31 July 2022, Dublin, Republic of Ireland. (**Keynote speech**) (Engineering education research)

3. Abdul Aziz Azlan*, Kai Boon Lim*, Abu Samah Zuruzi, Pull Out Force of Bean Plants Grown in Agar With Fluidic Microchannels, ASME 2021 International Mechanical Engineering Congress And Exposition (Virtual), 2021.

4. Zain Aljandali*, Abu Samah Zuruzi, Perception among Students towards Learning Environment and Innovation: A Study among Engineering Students in Saudi Arabia, Proceedings of the 5th International Conference on Advanced Research in Education, Teaching and Learning, 2021, Amsterdam, Netherlands. (Engineering education research)

5. Tuah Mohammad Haffiz^{+}, Muhammad S. Abu Bakar, Abu Samah Zuruzi, Sensing pressure using carbon filled-polydimethylsiloxane foams: From carbon nanotubes to rice-husk biochar, 8th International Conference on Advanced Material Engineering & Technology, 2020, Malaysia (Keynote).

6. Abdullah Norfatriah^{+}, Ahmad Sabli Ahmad Syamaizar, Abu Samah Zuruzi, Application of Porous Polydimethylsiloxane (PDMS) in oil absorption, International Conference on Innovative Technology, Engineering and Sciences 2018, Malaysia.

7. Kim S Siow, Siang T Chua, Zuruzi A Samah, Interfacial TEM Analysis of Sintered Silver in Air and N2-5%H2Gases Environment, IEEE 38th International Electronics Manufacturing Technology Conference (IEMT), 2018, Malaysia.

8. Noorul Zatul Amali Sarbini^{+}, Siow Kim Shyong^, Zuruzi Abu Samah, Fiber Treatment and Loading Affect Mechanical Properties of Bamboo/Cement Composite, International Conference on Studies in Architecture, Civil, Construction and Environmental Engineering (SACCEE-17), 10 and 11 January 2017, Bali.

9. Tuah Mohammad Haffiz^{+}, Mohd Yassin Ahmad Izzuddin, Daruis Affidah^{+}, Ahmad Amirul^{+}, Syamaizar Ahmad, Mohammad Nurul Islam, Abu Samah Zuruzi, Biochar: A “green” carbon source for pressure sensors, IEEE SENSORS, 2017, Glasgow.

10. Zuruzi, A. S., T. Hafiz^{+}, A. Norfatriah^{+}, M. H. Nurmawati, Porous CNT/PDMS flexible films with ultrasensitive sensing property, International Conference on Sports Science and Technology, 12 and 13 December 2017, Singapore.