

## CURRICULUM VITAE

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Lecturer

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### **Educational Qualifications:**

Degree	University	Year
M.Sc., (Advanced Materials)	Universiti Teknologi Mara (UiTM)	2012
B.Sc., (hons) (Physics)	Universiti Teknologi Mara (UiTM)	2009

### **Area of Expertise:**

- Nanomaterials, Electrochemistry, Supercapacitor

### **Employment History:**

- October 2013 – Till date: **Lecturer** in Centre for Defence Foundation Studies, National Defence University of Malaysia (NDUM), Malaysia
- February 2013 – October 2013: **Lecturer** in Windfield International College, Malaysia
- August 2012 – February 2013: **Collection Officer** in Malayan Banking Berhad
- October 2011 – March 2012: **Laboratory Instructor** in Faculty of Applied Sciences, Universiti Teknologi Mara (UiTM), Malaysia
- June 2009 – June 2010: **Research Assistant** in Faculty of Applied Sciences, Universiti Teknologi Mara (UiTM), Malaysia

### **Awards:**

- Gold Award in Defence, Security and Sustainability Exhibition 2022 (DSS 2022)
- Silver Award in Defence, Security and Sustainability Exhibition 2019 (DSS 2019)
- Excellent Service Awards 2017 (NDUM)
- Bronze Award in Defence, Security and Sustainability Exhibition 2017 (DSS 2017)

### **Research Projects / Grants:**

- NDUM Short Term Grant (2018). Anion Characteristic of Seaweed Based Green Biopolymer Electrolytes for Aluminium - Air Battery (Completed): RM 20,000.

- Fundamental Research Grant Scheme (FRGS) (2017). Strain Tuned ion (Li, Na) Migration in The Iron Hydrosulphate Cathode Material: A First Principles Investigation. (Completed): RM 75,200.
- Fundamental Research Grant Scheme (FRGS) (2015). Ionic transport mechanism study of lithium based ionogel electrolytes (Completed): RM 107,200.
- Fundamental Research Grant Scheme (FRGS) (2013). Synthesis and First Principle Studies of  $\text{Li}_2\text{Fe}_x\text{M}_{1-x}\text{SiO}_4$  (M= Ni, Co, Mg or V) Cathode Materials (Completed): RM 89,000.
- Exploratory Research Grant Scheme (ERGS) (2012). Development of Composite Electrolytes for Rechargeable Metal-Air Cells Development of Composite Electrolytes for Rechargeable Metal-Air Cells (Completed). RM 89,000.

## **Publications**

- **Academic Journals:**

- [1] **NHA Rosli**, KS Lau, T Winie, SX Chin, S Zakaria, CH Chia. Rapid microwavesynthesis of molybdenum disulfide-decorated reduced-graphene oxide nanosheets for use in high electrochemical performance supercapacitors. **Journal of Energy Storage** (2022) 52: 104991 – 105003.
- [2] **NHA Rosli**, KS Lau, T Winie, SX Chin, CH Chia. Synergistic effect of sulfur-doped reduced graphene oxide created via microwave-assisted synthesis for supercapacitor applications. **Diamond and Related Materials** (2021) 120: 108696 – 108705.
- [3] **NHA Rosli**, KS Lau, T Winie, SX Chin, CH Chia. Microwave-assisted reduction of graphene oxide for an electrochemical supercapacitor: structural and capacitance behaviour. **Materials Chemistry and Physics** (2021) 262: 124274 – 124280.
- [4] **NHA Rosli**, SAM Noor, KA Ahmad, T Winie. Effect of  $\text{HNO}_3$  on structural and electrical properties of hexanoyl chitosan/polystyrene- $\text{LiCF}_3\text{SO}_3$ - $\text{TiO}_2$ . **Journal of Fundamental and Applied Sciences** (2017) 9 (3S): 141 – 153.
- [5] **NHA Rosli**, FH Muhammad, CH Chan, Tan Winie.. Effect of Filler Type on the Electrical Properties of Hexanoyl Chitosan-based Polymer Electrolytes. **Advanced Materials Research** (2014) 832: 224 – 227.
- [6] Tan Winie, **NHA Rosli**, MR Ahmad, RHY Subban, CH Chan.  $\text{TiO}_2$  Dispersed Hexanoyl Chitosan-Polystyrene- $\text{LiCF}_3\text{SO}_3$  Composite Electrolyte Characterized for Electrical and Tensile Properties. **Polymers Research Journal** (2014) 7(2): 171 – 181.
- [7] Tan Winie, NSM Hanif, **NHA Rosli**, RHY Subban. Ac Conductivity Study of Hexanoyl Chitosan- $\text{LiCF}_3\text{SO}_3$ -EC- $\text{Al}_2\text{O}_3$  Nanocomposite. **Advanced Materials Research** (2013) 667: 93 – 98.
- [8] **NHA Rosli**, CH Chan, RHY Subban, Tan Winie. Studies on the Structural and Electrical Properties of Hexanoyl Chitosan/Polystyrene-based Polymer Electrolytes. **Physics Procedia** (2012) 25: 215 – 220.
- [9] Tan Winie, FH Muhammad, **NHA Rosli**. Effect of anion size on the conductivity behavior of hexanoyl chitosan-based polymer electrolytes. **Advanced**

**Materials Research** (2012) 545: 317 – 320.

- [10] **NHA Rosli**, FH Muhammad, RHY Subban, Tan Winie. Structural and electrical studies of hexanoyl chitosan based electrolyte system. **Materials Research Innovations** (2012) 15(2): 94 – 96.

• **Proceeding Articles:**

- [1] **NHA Rosli**, NI Harun, MFM Taib, SIY Saaid, TIT Kudin, AMM Ali, MZA Yahya. Effect of Plasticizers on Methyl Cellulose Based Alkaline Solid Polymer Electrolytes. **AIP Proceedings** (2010) 1250: 233 – 236.
- [2] NI Harun, NS Sabri, **NHA Rosli**, MFM Taib, SIY Saaid, TIT Kudin, AMM Ali, MZA Yahya. Proton Conductivity Studies on Biopolymer Electrolytes. **AIP Proceedings** (2010) 1250: 237 – 240.

**Presentations:**

**Presenter:**

- 30 – 1 December 2020: **Postgraduate Colloquium** organized by Applied Physics Department, Faculty of Science and Technology, National University of Malaysia, Malaysia.
- 1 – 2 April 2012: **2012 International Conference on Solid State Devices and Materials Science** organized by Information Engineering Research Institute.
- 2 – 3 March 2011: **International Conference Nano Science and Nano Technology, Nano-Scitech 2011** organized by Universiti Teknologi Mara, Malaysia.
- 29 – 1 November 2010: **International Conference on the Advancement of Materials & Nanotechnology II (ICAMN II-2010)** organized by Universiti Teknologi Mara, Malaysia.
- 14 – 17 June 2010: **3rd International Conference on Functional Materials and Devices, 2010 (ICFMD-2010)** organized by University of Malaya, Malaysia.
- 7 – 9 December 2009: **National Physics Conference 2019** organized by Alkaline Batteries: Electrolytes Preparation and Battery Characterization organized by Universiti Teknologi Mara, Malaysia.

**Membership in Professional Society:**

- Lifetime member of Malaysian Solid State Science and Technology Society (MASS)
- Lifetime member of International Association of Engineers (IAENG)
- Lifetime member of Malaysian Physics Institute (IFM)