

SECTION I: PERSONAL AND SERVICE PARTICULARS

Name : Dr. Nurul Hayati Binti Idris
 Present position : Associate Professor
 Nationality : Malaysia
 Correspondence address : Faculty of Ocean Engineering Technology and Informatics,
 Universiti Malaysia Terengganu
 21030 Kuala Nerus, Terengganu
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 Fax No. : 09-6683326
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• Academic Qualification

Degree Awarded	Year Awarded	Institution	Major/Minor
Ph.D	2012	University of Wollongong, Australia	Energy Storage Materials Thesis: Advanced Materials for Rechargeable Lithium Battery
MSc	2006	University of Malaya	Physics Thesis: Electrical Studies on LiTFSI Doped Chitosan/PEO Blends
BSc	2003	University of Malaya	Computational Physics and Electronics

• Employment Records

Designation with Institution	Appointment		Position
	From	Until	
Faculty of Ocean Engineering Technology & Informatics, Universiti Malaysia Terengganu	Aug 2019	Present	Associate Professor DS54
School of Ocean Engineering, Universiti Malaysia Terengganu	Jan 2019	July 2019	Associate Professor DS54
School of Ocean Engineering, Universiti Malaysia Terengganu	Dec 2013	Dec 2018	Senior Lecturer DS52

Department of Physical Sciences, Faculty of Science and Technology, Universiti Malaysia Terengganu	Apr 2012	Nov 2013	Senior Lecturer DS52
Department of Physical Sciences, Faculty of Science and Technology, Universiti Malaysia Terengganu	Feb 2007	March 2012	Lecturer DS45
Department of Physical Sciences, Faculty of Science and Technology, Kolej Universiti Sains dan Teknologi Malaysia	July 2006	Jan 2007	Lecturer DS45

SECTION II: ACADEMIC PROFILE

- **Supervision**

Matrix Number	Student's Name	Role	Period		Status
			From	Until	
PhD Level					
P4043	Sarah Umeera Binti Muhamad	Main Supervisor	Sept 2019	Present	Ongoing
P3985	Jumana Nije Tawfiq Dawoud	Main Supervisor	June 2019	Present	Ongoing
P3357	Nor Fazila Binti Mahamad Yusoff	Main Supervisor	Feb 2018	Present	Ongoing
GSK2669	Muhamad Amirullah Bin Ramlii	Co-Supervisor	July 2017	Present	Ongoing
MSc Level					
P2953	Nurul Amirah Binti Ali	Co-Supervisor	March 2017	June 2019	Completed
P2955	Noratiqah Binti Sazelee	Co-Supervisor	March 2017	June 2019	Completed
GSK2285	Sarah Umeera Binti Muhamad	Main Supervisor	Feb 2015	Aug 2018	Completed
GSK2288	Nurul Saniah Binti Azhar	Main Supervisor	Feb 2015	Oct 2019	Completed
GSK2287	Nur Syukirah Binti Marzuki	Main Supervisor	Feb 2015	Aug 2019	Completed
GSK2284	Norsaadatul Akmal Binti Mohd Zaid	Main Supervisor	Feb 2015	Oct 2017	Completed
GSK2234	Nur Diyana Binti Rosedhi	Main Supervisor	Oct 2014	June 2017	Completed
GSK2235	Nabilah Binti Mokhtar	Main Supervisor	Oct 2014	Apr 2017	Completed

GSK2019	Nor Fazila Binti Mahamad Yusoff	Supervisor	Main Supervisor	March 2014	Dec 2016	Completed
GSK1613	Nur Umira Binti Taib	Supervisor	Main Supervisor	Nov 2012	Sept 2015	Completed

b) Research and Innovation

- ***h*-index and Citation**

(Source from Web of Science ResearcherID as of 26 June 2021)

<https://publons.com/researcher/1390416/nurul-hayati-idris/>

Current *h*-index : 19

Total citation : 1264

(Source from Scopus as of 26 June 2021)

<https://www.scopus.com/authid/detail.uri?origin=AuthorProfile&authorId=36659181400&zone=>

Current *h*-index : 19

Total citation : 1307

- **Research Grant**

*FRGS, RAGS and ERGS grants funded by Ministry of Higher Education Malaysia

**GGRG-UMT, TAPE-RG UMT, K-TAG UMT and TPM UMT grants funded by Universiti Malaysia Terengganu

Title	Source	Role	Period		Amount (RM)
			From	Until	
Investigation of External Pressure Effect in Induced Correlate on Magnetic and Structure Phase Transitions for RMn_2X_2 (R=Rare Earth, Mn=Manganese and X=metalloid Si@Ge) Series Compounds as Refrigerant in Magnetic Refrigerator Application	FRGS	Co- Investigator	Sept 2019	Aug 2022	144 900
Investigation on the Hydrogen Storage Properties and Reaction Mechanism of Borohydrides-Catalysts Composite as a Potential Material for Solid-State Hydrogen	GGRG-UMT	Co- Investigator	Aug 2019	July 2022	150 000
Green Synthesis Of Heteroatom-Doped Graphene Aerogel Via One-Pot Hydrothermal Method and the Storage Mechanism as an Anode for Sodium-Ion Batteries	FRGS	Main Investigator	Jan 2019	Dec 2021	98 200
Understanding the correlation of energy storage	FRGS	Co-	Jan	Dec	127 200

mechanism and oxygen vacancies density in modified NiX ₂ O ₄ /EGF (X=Mn,Co) as active materials in asymmetrical cell		Investigator	2019	2021	
Green Synthesis and Ab Initio Study of Orthorhombic Na _{0.44} MnO ₂ Via Ionothermal Methods by Controlling the Post-Synthesis Annealing for Na-Ion Battery's Cathode Material.	TAPE-RG UMT	Main Investigator	April 2018	March 2020	20 000
Study the Catalytic Effect of Ternary Metal Oxides on the Hydrogen Storage Properties of Complex Hydrides	TAPE-RG UMT	Co-Investigator	April 2018	March 2020	20 000
The Application of Piezoelectric Energy Harvester for Small Fishing Boat	K-TAG UMT	Co-Investigator	March 2018	Feb 2019	5 000
Synthesis of High-Voltage Spinel LiNi _{0.5} Mn _{1.5} O ₄ via Hydrothermal and Molten Salt Methods by Controlling the Post-synthesis Annealing and Element Substitution for Lithium-ion Battery's Cathode Material.	FRGS	Main Investigator	July 2014	June 2016	97 815
Study on the Hydrogen Storage Properties of Mixed Metal Hydride-Catalyst Composite for Hydrogen Energy Application.	FRGS	Co-Investigator	Dec 2014	Nov 2017	134 800
Characterization of Algae Biomass from Kuala Terengganu Coastal Areas as a Fuel by Thermogravimetric Analysis and Its Kinetic Parameter Estimations.	FRGS	Co-Investigator	July 2014	June 2017	128 000
Succinonitrile as an Additive for Solid Polymer Electrolyte.	RAGS	Main Investigator	Jan 2013	Dec 2015	60 000
Electrical, Structural and Ionic Transport Study of Natural Polymer Based on Cellulose Doped with NH ₄ Cl Proton Conducting Membrane Towards the Advancement of Green Materials.	FRGS	Co-Investigator	Apr 2013	March 2016	95 100
Study of Light-Metal Hydride Composite System for Solid-State Hydrogen Storage for Energy Application.	FRGS	Co-Investigator	Apr 2013	March 2015	130 000
Effects of Metals Decorated on the Hydrogen Storage Capacity of Carbonaceous Materials for	TPM UMT	Main Investigator	Aug 2012	July 2014	20 000

- **Publication**

- ***First Author/Corresponding Author**

- **Journal**

- **2021**

1. Abdul Rashid Abdul Rahman, Muhamad Faiz Md Din, Jianli Wang, Nur Sabrina Suhaimi, Nurul Hayati Idris, Shi Xue Dou, Mohammad Ismail, Muhammad Zahir Hassan, and Mohd Taufik Jusoh, 2021, "Magnetism and Thermomechanical Properties in Si Substituted MnCoGe Compounds", Crystals, 11, 694-703 (ISI indexed).
2. ***N. H. Idris**, A. S. K. Anuar, N. A. Ali and M. Ismail, 2021, "Effect of K₂NbF₇ on the hydrogen release behaviour of NaAlH₄", Journal of Alloys and Compounds, 851, 156686-156691 (ISI indexed).

- **2020**

1. Nor Fazila Mahamad Yusoff, ***Nurul Hayati Idris**, Muhamad Faiz Md Din, Siti Rohana Majid, Noor Aniza Harun, and Md Mokhlesur Rahman, 2020, "Electrochemical Sodiation/Desodiation into Mn₃O₄ Nanoparticles" ACS Omega, 5, 29158–29167 (ISI indexed).
2. Hanis Mohd Yusoff, Nurul Hayati Idris, Nurul Fatin Hipul, Nor Fazila Mahamad Yusoff, Nur Zafirah Mohd. Izham and Irshad Ul Haq Bhat, 2020, "Green Synthesis of Zinc Oxide Nanoparticles Using Black Tea Extract and its Potential as Anode Material in Sodium-Ion Batteries", Malaysian Journal of Chemistry, 22, 43-51 (SCOPUS indexed).
3. Nor Fazila Mahamad Yusoff, ***Nurul Hayati Idris**, Mohd Faiz Md Din, Siti Rohana Majid, Noor Aniza Harun and Md Mokhlesur Rahman, 2020, "Investigation on the Electrochemical Performances of Mn₂O₃ as a Potential Anode for Na-Ion Batteries", Scientific Reports, 10, 9207-9217 (ISI indexed).
4. N. A. Sazelee, M. S. Yahya, N. A. Ali, N. H. Idris, and M. Ismail, 2020, "Enhancement of dehydrogenation properties in LiAlH₄ catalysed by BaFe₁₂O₁₉", Journal of Alloys and Compounds, 835, 155183-155190 (ISI indexed).
5. N. A. Sazelee, N. H. Idris, M. F. Md Din, M. S. Yahya, N. A. Ali, and M. Ismail, 2020, "LaFeO₃ synthesised by solid-state method for enhanced sorption properties of MgH₂", Results in Physics, 16, 102844-102850 (ISI indexed).
6. Muhamad Faiz Md Din, Mohamed Shafie Mohd Jusoh, Abdul Rashid Abdul Rahman, Jian Li Wang, Nurul Hayati Idris, Mohammad Ismail and Wan Fathul Hakim Wan Zambri, 2020, "Study of Heat Treatment Effect in MnCoGe Compound on Structure and Electric Properties", Materials Science Forum, 1010, 86-91 (SCOPUS indexed).

- **2019**

1. N. A. Ali, N. H. Idris, N. A. Sazelee, M. S. Yahya, F. A. Halim Yap and M. Ismail, 2019, "Catalytic effects of MgFe_2O_4 addition on the dehydrogenation properties of LiAlH_4 ", *International Journal of Hydrogen Energy*, 44, 28227-28234 (ISI indexed).
2. N. A. Ali, N. H. Idris, M. F. Md Din, M.S. Yahya and M. Ismail, 2019, "Nanoflakes MgNiO_2 synthesised via a simple hydrothermal method and its catalytic roles on the hydrogen sorption performance of MgH_2 ", *Journal of Alloys and Compounds*, 796, 279-286 (ISI indexed).
3. N. A. Sazelee, M. S. Yahya, N. H. Idris, M. F. Md Din and M. Ismail, 2019, "Desorption properties of LiAlH_4 doped with LaFeO_3 catalyst", *International Journal of Hydrogen Energy*, 44, 11953-11960 (ISI indexed).
4. Nur Diyana Rosedhi and ***Nurul Hayati Idris**, 2019, "Electrochemical performance of $\text{LiNi}_{0.5}\text{Mn}_{1.5}\text{O}_4$ synthesized via ball-milling for Li-ion batteries", *Ionics*, 25, 2069–2076 (ISI indexed).
5. N. A. Ali, M. S. Yahya, N. S. Mustafa, N. A. Sazelee, N. H. Idris and M. Ismail, 2019, "Modifying the hydrogen storage performances of NaBH_4 by catalyzing with MgFe_2O_4 synthesized via hydrothermal method", *International Journal of Hydrogen Energy*, 44, 6720-6727 (ISI indexed).
6. Sarah Umeera Muhamad, ***Nurul Hayati Idris** and M. F. Md Din, 2019, "Synergistic Effect on the Electrochemical Performances of Polypyrrole Nanoparticles Distributed on the Graphene Layers as an Electrodes for Supercapacitors", *International Journal of Electrochemical Science*, 14, 6920–6937 (ISI indexed).

2018

1. F.A. Halim Yap, N.A. Ali, N.H. Idris and M. Ismail, 2018, "Catalytic effect of MgFe_2O_4 on the hydrogen storage properties of $\text{Na}_3\text{AlH}_6\text{-LiBH}_4$ composite system", *International Journal of Hydrogen Energy*, 43, 20882-20891 (ISI indexed, IF. 4.229, Q1).
2. Nabilah Mokhtar, ***Nurul Hayati Idris** and M.F. Md Din, 2018, "Molten Salt Synthesis of Disordered Spinel $\text{LiNi}_{0.5}\text{Mn}_{1.5}\text{O}_4$ with Improved Electrochemical Performance for Li-ion Batteries", *International Journal of Electrochemical Science*, 13, 10113 – 10126 (ISI indexed, IF. 1.369, Q4).
3. N.A. Sazelee, N.H. Idris, M.F. Md Din, N.S. Mustafa, N.A. Ali, M.S. Yahya, F.A. Halim Yap, N.N. Sulaiman and M. Ismail, 2018 "Synthesis of $\text{BaFe}_{12}\text{O}_{19}$ by solid state method and its effect on hydrogen storage properties of MgH_2 ", *International Journal of Hydrogen Energy*, 43, 20853-20860 (ISI indexed, IF. 4.229, Q1).
4. N. A. Ali, Nurul Hayati Idris, M. F. Md Din, N. S. Mustafa, N. A. Sazelee, F. A. Halim Yap, N. N. Sulaiman, M. S. Yahya and M. Ismail, 2018, "Nanolayer-like-shaped MgFe_2O_4 synthesised via a simple hydrothermal method and its catalytic effect on the hydrogen storage properties of MgH_2 ", *RSC Advances*, 8, 15667-15674 (ISI indexed, IF. 2.936, Q2).

2017

1. N. F. M. Yusoff and ***N. H. Idris**, 2017, "Ionic liquid based PVDF/PMMA gel polymer electrolyte for lithium rechargeable battery", *Journal of Mechanical Engineering and Sciences*, 11, 3152-3165 (SCOPUS indexed).

2. Sarah Umeera Muhamad, ***Nurul Hayati Idris**, Hanis Mohd Yusoff, M.F. Md Din, S.R. Majid, 2017, “*In-situ* encapsulation of nickel nanoparticles in polypyrrole nanofibres with enhanced performance for supercapacitor”, *Electrochimica Acta*, 249, 9-15 (ISI indexed, IF. 5.116, Q1).
3. ***N.H. Idris**, N.S. Mustafa, M. Ismail, 2017, “MnFe₂O₄ nanopowder synthesised via a simple hydrothermal method for promoting hydrogen sorption from MgH₂”, *International Journal of Hydrogen Energy*, 42, 21114-21120 (ISI indexed, IF. 4.229, Q1).

2016

1. Norsaadatul Akmal Mohd Zaid and ***Nurul Hayati Idris**, 2016, “Enhanced Capacitance of Hybrid Layered Graphene/Nickel Nanocomposite for Supercapacitors”, *Scientific Reports*, 6, 32082-32090 (ISI indexed, IF. 4.122, Q1).
2. Nur Diyana Rosedhi, ***Nurul Hayati Idris**, Md Mokhlesur Rahman, M.F. Md Din and Jianli Wang, 2016, “Disordered spinel LiNi_{0.5}Mn_{1.5}O₄ cathode with improved rate performance for lithium-ion batteries”, *Electrochimica Acta*, 206, 374–380 (ISI indexed, IF. 5.116, Q1).
3. Nabilah Mokhtar and ***Nurul Hayati Idris**, 2016, “Comparison on electrochemical performances of LiNi_{0.5}Mn_{1.5}O₄ cathode materials synthesized using different precursors”, *Materials Today: Proceedings*, 3S, S129 – S135 (SCOPUS indexed).
4. Nur Umira Taib and ***Nurul Hayati Idris**, 2016, “Microporous Chitosan-Succinonitrile Membrane for Lithium Rechargeable Batteries”, *Advanced Materials Research*, 1133, 8-12 (Indexed).

2015

1. Nur Syukirah Marzuki, Nur Umira Taib, Mohd Faiz Hassan, ***Nurul Hayati Idris**, 2015, “Enhanced Lithium Storage in Co₃O₄/carbon Anode for Li-ion Batteries”, *Electrochimica Acta*, 182, 452-457 (ISI indexed, IF. 5.116, Q1).
2. N.S. Mustafa, N.H. Idris, M. Ismail, 2015, “Effect of K₂TiF₆ additive on the hydrogen storage properties of 4MgH₂-LiAlH₄ destabilized system”, *International Journal of Hydrogen Energy*, 40, 7671-7677 (ISI indexed, IF. 4.229, Q1).

2014

1. Nur Umira Taib and ***Nurul Hayati Idris**, 2014, “Plastic crystal–solid biopolymer electrolytes for rechargeable lithium batteries”, *Journal of Membrane Science*, 468, 149–154 (ISI indexed, IF. 6.578, Q1)

2012

1. ***Nurul Hayati Idris**, Md. Mokhlesur Rahman, Jia-Zhao Wang, Hua-Kun Liu, 2012, “Microporous gel polymer electrolytes for lithium rechargeable battery application”, *Journal of Power Sources*, 201, 294-300 (ISI indexed, IF. 6.945, Q1).

2011

1. ***Nurul Hayati Idris**, M.M. Rahman, Jia-Zhao Wang, Zhi-Xin Chen and Hua-Kun Liu, 2011, “Synthesis and electrochemical performance of LiV₃O₈/carbon nanosheet composite as cathode material for lithium-ion batteries”, *Composites Science and Technology*, 71, 343-349 (ISI indexed, IF. 5.160, Q1).

2. ***Nurul Hayati Idris**, Md Mokhlesur Rahman, Shu-Lei Chou, Jia-Zhao Wang, David Wexler, Hua-Kun Liu, 2011, "Rapid synthesis of binary α -NiS- β -NiS by microwave autoclave for rechargeable lithium batteries", *Electrochimica Acta*, 58, 456-462 (ISI indexed, IF. 5.116, Q1).
3. ***Nurul H. Idris**, Jiazhao Wang, Shulei Chou, Chao Zhong, Md. Mokhlesur Rahman and Huakun Liu, 2011, "Effects of polypyrrole on the performance of nickel oxide anode materials for rechargeable lithium-ion batteries", *Journal of Materials Research*, 26, 860-866 (ISI indexed, IF. 1.495, Q3).
4. Jia-Zhao Wang, Chao Zhong, David Wexler, Nurul Hayati Idris, Zhao-Xiang Wang, Li-Quan Chen and Hua-Kun Liu, 2011, "Graphene-Encapsulated Fe₃O₄ Nanoparticles with 3D Laminated Structure as Superior Anode in Lithium Ion Batteries", *Chemistry-A European Journal*, 17, 661-667 (ISI indexed, IF. 5.160, Q1).
5. Iresha R.M. Kottegoda, Nurul Hayati Idris, Lin Lu, Jia-Zhao Wang and Hua-Kun Liu, 2011, "Synthesis and characterization of graphene-nickel oxide nanostructures for fast charge-discharge application", *Electrochimica Acta*, 56, 5815-5822 (ISI indexed, IF. 5.116, Q1).

2010

1. M.M. Rahman, Jia-Zhao Wang, Nurul Hayati Idris, Zhixin Chen and Huakun Liu, 2010, "Enhanced lithium storage in a VO₂(B)-multiwall carbon nanotube microsheet composite prepared via an in-situ hydrothermal process", *Electrochimica Acta*, 56, 693-699 (ISI indexed, IF. 5.116, Q1).

2007

1. ***N.H. Idris**, H.B. Senin and A.K. Arof, 2007, "Dielectric spectra of LiTFSI-doped chitosan/PEO blends", *Ionics*, 13, 213-217 (ISI indexed, IF. 2.347, Q2).

2006

1. A.S.A. Khair, S.R. Majid, N.H. Idris, M.F. Hassan, R. Puteh and A.K. Arof, 2006, "Ionic Hopping Transport in Chitosan-Based Polymer Electrolyte", *Materials Science Forum*, 517, 237-241 (SCOPUS indexed).
2. M.F. Hassan, N.H. Idris, S.R. Majid, Tan Winie, A. S. A. Khair and A.K. Arof, 2006, "Effect of Ethylene Sulphite on the Conductivity and Morphology of PEO-KOH Films", *Materials Science Forum*, 517, 89-92 (SCOPUS indexed).

2005

1. ***N.H. Idris**, S.R. Majid, A.S.A. Khair, M.F. Hassan and A.K. Arof, 2005, "Conductivity Studies on Chitosan/PEO Blends with LiTFSI Salt", *Ionics*, 11, 375-377 (ISI indexed, IF. 2.347, Q2).

Proceeding

2019

1. M. F. Md Din, J. L. Wang, A. R. Abdul Rahman, Y. N. A. Norizan, N. S. Suhaimi, N. H. Idris, W. F. H. Wan Zamri, and F. Abdul Aziz, 2019, "Structure analysis using XRD refinement for replacement of copper (Cu) with manganese (Mn) in NdMn₂Si₂ compound", *AIP Conference Proceedings*, 2068, 0200621-0200626.

2018

1. M. F. Md Din, J. L. Wang, Y. N. A. Norizan, P. Shamba, F. R. Hashim, N. H. Idris and W. F. H. Wan Zamri, 2018, “Systematically study on the magnetism and critical behaviour of layered $\text{NdMn}_{1.4}\text{Cu}_{0.6}\text{Si}_2$ ”, AIP Conference Proceedings, 2016, 0200871-0200877.

2017

1. Nurul Saniah Azhar and ***Nurul Hayati Idris** (2017). Palladium Nanocomposite as an Electrode for Supercapacitor. In A. K. Arof, L. N. Sim, L. P. Teo and H. J. Woo (Eds.), *Proceedings of National Workshop on Functional Materials 2017*. Paper presented at the 2nd National Workshop on Functional Materials 2017, University of Malaya, 17-18 January (pp. 141-148), ISBN. 978-967-12067-1-3.

2016

1. Nor Fazila Mahamad Yusoff and ***Nurul Hayati Idris**, 2016, “Ionic liquid Based PVDF/PMMA Gel Polymer Electrolyte for Lithium Rechargeable Battery”, *Proceeding of Ocean, Mechanical and Aerospace-Science and Engineering*, 3, 456 – 469.

Book

2020

1. Mohammad Ismail, Muhammad Syarifuddin Yahya, Nurul Hayati Idris, Nurul Shafikah Mohd Mustafa and Muhammad Firdaus Asyraf Abd. Halim Yap, 2020, “Novel materials and technologies for hydrogen storage” in *New Dimensions in Production and Utilization of Hydrogen*, 337-365, Elsevier.

2017

1. Muhamad Zalani bin Daud, Mohammad bin Ismail and Nurul Hayati binti Idris, 2017 (Eds.), *Proceedings on National Technical Seminar on Underwater System Technology (NUSYS) 2017*, Universiti Malaysia Terengganu, eISBN: 978-967-2134-03-9.

2007

1. H. B. Senin and N. H. Idris, 2007 (Eds.), *Solid State Science and Technology ICSSST2006*, American Institute of Physics.

c) Awards in Academic/Professional Field

• Research

2020

1. Bronze award at Minggu Penyelidikan dan Inovasi 2020 (MPI 2020) for the invention of Porous cubic-like Mn_2O_3 : Na-ion batteries as a contender to Li-ion batteries enabling low-cost, safe and high rate performances anode material, 5-7 March 2020.

2018

1. Silver award at the ITEX 2018 for the invention of Nanolayers-Like Shape MgFe_2O_4 : Green Synthesis and Its Catalytic Role on the Hydrogen Storage Performance of MgH_2 , 10-12 May 2018.

2. Gold award at Minggu Penyelidikan dan Inovasi 2018 (MPI 2018) for the invention of Nanolayers-Like Shape MgFe_2O_4 : Green Synthesis and Its Catalytic Role on the Hydrogen Storage Performance of MgH_2 , 7-9 April 2018.
3. Silver award at Minggu Penyelidikan dan Inovasi 2018 (MPI 2018) for the invention of $4\text{MgH}_2\text{-Na}_3\text{AlH}_6$ Doped TiF_3 Composite: Highly Potential Hydrogen Storage Material For Environmental Friendly Hydrogen-Powered Fuel Cell Vehicles, 7-9 April 2018.
4. Silver award at Minggu Penyelidikan dan Inovasi 2018 (MPI 2018) for the invention of Green Synthesis of $\text{BaFe}_{12}\text{O}_{19}$ by Solid State Method and Its Catalytic Effect on the Sorption Properties of MgH_2 , 7-9 April 2018.
5. Silver award at Minggu Penyelidikan dan Inovasi 2018 (MPI 2018) for the invention of Graphene Aerogel: Potential_Carbon_Scaffold_For_Metal_Hydride-Based Nanoconfinement for Storing Hydrogen in Solid Form, 7-9 April 2018.
6. Bronze award at Minggu Penyelidikan dan Inovasi 2018 (MPI 2018) for the invention of Prototype of Solid-State Hydrogen Tank: The Road to Environmentally and Energy-Conserving Vehicles, 7-9 April 2018.
7. Bronze award at Minggu Penyelidikan dan Inovasi 2018 (MPI 2018) for the invention of Nanostructured Manganese Oxides as a Negative Electrode for High-Rate Sodium-Ion Batteries, 7-9 April 2018.
8. Silver award at Minggu Penyelidikan dan Inovasi 2018 (MPI 2018) for the invention of Piezoelectric Sensor as Renewable Energy Harvester from Ocean Waves, 7-9 April 2018.

2017

1. Silver award at the ITEX 2017 for the invention of Graphene/Polypyrrole Material Nanocomposite for Electrochemical Devices towards a Simple and Green Approach, 11-13 May 2017.
2. Bronze award at the PECIPTA 2017 for the invention of Improvement of Hydrogen Storage Properties in MgH_2 Catalysed by K_2NbF_7 , 7-9 October 2017.
3. Silver award at Minggu Penyelidikan dan Inovasi 2017 (MPI 2017) for the invention of Solid-State Hydrogen Storage Tank Design for Mobile Applications, 12-13 April 2017.

2016

1. Gold awarded to Nurul Hayati Idris at the Inovasi@UMT 2016 for the invention of Graphene/Polypyrrole Material Nanocomposite for Electrochemical Devices towards a Simple and Green Approach, 26-28 May 2016.
2. Gold awarded to Nurul Hayati Idris and Sarah Umeera Muhamad at the Inovasi@UMT 2016 for the invention of Polypyrrole-Encapsulated Nickel for Supercapacitor Application, 26-28 May 2016.
3. Silver awarded to Nurul Hayati Idris and Nur Syukirah Marzuki at the Inovasi@UMT 2016 for the invention of Co_3O_4 /Carbon Composite with Enhance Rate Capability in Li-Ion Battery, 26-28 May 2016.
4. Silver awarded to Nurul Hayati Idris and Norsaadatul Akmal Mohd Zaid at the Inovasi@UMT 2016 for the invention of Graphene-Decorated Nickel Nanocomposite: Alternative Electrode for Supercapacitor, 26-28 May 2016.
5. Silver awarded to Nurul Hayati Idris and Nur Diyana Rosedhi at the Inovasi@UMT 2016 for the invention of Novel Microstructured Spinel

LiNi_{0.5}Mn_{1.5}O₄ Cathode with Enhanced Rate Capability for Lithium-Ion Battery, 26-28 May 2016.

6. Bronze awarded to Nurul Hayati Idris and Nabilah Mokhtar at the Inovasi@UMT 2016 for the invention of LiNi_{0.5}Mn_{1.5}O₄: High Performance Cathode Materials for Lithium-Ion Battery, 26-28 May 2016.

- **Membership**

Professional Bodies/Academic Society/NGOs	Role	Membership No.	Effective Date
American Chemical Society	Member	31168852	6 Nov 2020 – 5 Nov 2021
Lembaga Teknologis Malaysia (MBOT)	Professional Technologist	PT20040192	9 Apr 2020
Lembaga Teknologis Malaysia (MBOT)	Graduate Technologist	GT17120195	13 Dec 2017
Malaysia Association on Solid-State Society (MASS)	Life Member	MASS579	Nov 2017
Malaysian Nuclear Society	Life Member	563/2008	May 2008

- **Thesis Examiner**

Appointment	Candidate	Level	Organization	Date
Thesis Examiner				
External Examiner for MSc Thesis	Mohd Noor Zairi Bin Mohd Sapri	MSc	Universiti Teknologi MARA	22 Sept 2019
Internal Examiner for MSc Thesis	Wan Mohamad Ikhmal Wan Mohamad Kamaruzzaman	MSc	UMT	15 Aug 2019
External Examiner for PhD Thesis	Vahide Ghanooni Ahmadabadi	PhD	Deakin University, Australia	2 April 2019
External Examiner for MSc Thesis	Sim Cheng Kim	MSc	University of Malaya	Feb 2015

- **Assessor/Evaluator for Research Grant Proposal**

Appointment	Grants	Source	Date
National research grants evaluator	DANA R&D	Ministry of Science, Technology & Innovation (MOSTI)	1 Jan 2021 – 31 Dec 2023
National research grants evaluator	Fundamental Research Grant Scheme (FRGS) Fasa 1/2021	Ministry of Higher Education Malaysia	16 Apr – 23 Apr 2021
Internal evaluator	Fundamental Research Grant Scheme (FRGS) Siri 1/2021	Ministry of Higher Education Malaysia	March 2021
Internal evaluator	Skim Talent and Publication Enhancement Research Grant (TAPE-RG) Tahun 2020	UMT	6 Oct 2020
National research grants evaluator	Fundamental Research Grant Scheme (FRGS) Fasa 1/2020	Ministry of Higher Education Malaysia	20 Apr – 7 May 2020
Internal evaluator	Research Intensified Grant Scheme (RIGS)	UMT	July 2019
Internal evaluator	FRGS-RACER Fasa 1/2019	Ministry of Higher Education Malaysia	May 2019
Internal evaluator	Fundamental Research Grant Scheme (FRGS) Siri 1/2019	Ministry of Higher Education Malaysia	March 2019

- **Linkages/Networking**

Linkage Description	Client/Organization	Year of Involvement
Collaborator and Management Committee for “AccelNet: An International Network-to-Network Approach to Building an International Li-ion Battery Safety Network (LIBS-NT)” for NSF Award, USA	University of South Carolina	Jan 2020
Collaborator for Ocean Wave Renewable Energy Project Development	Universiti Teknologi Malaysia lead by Dr. Nurul Hazrina Idris	Dec 2017- July 2018
Industry Collaboration for “Project HyEn -	Universiti Kebangsaan Malaysia	2017-present

Renewable Energy Generation and Crude Palm Oil Recovery” bid for Projek Malaysia Laboratories for Academia-Business Collaboration (MyLab)	lead by Prof. Ir. Dr. Mohd Sobri Takriff	
Research Collaboration	Dr. Muhamad Faiz Md Din Universiti Pertahanan Nasional Malaysia	2015-present
Research Collaboration	Prof. Dr. Siti Rohana Majid University of Malaya	2012-present
Research Collaboration	Dr. Md Mokhlesur Rahman Deakin University, Australia	2012-present
Research Collaboration	Dr. Lukman Noerochim Sepuluh Nopember Institute of Technology, Surabaya	2012-present

SECTION III: OTHER INFORMATION

- **Academic Referees**

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