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ACADEMIC QUALIFICATION

Ph.D. In Physics

2012 – 2014

Universiti Malaysia Terengganu

B.App.Sc. (Electronics and Instrumentational Physics)

2007 – 2010

Universiti Malaysia Terengganu

PROFESSIONAL SERVICES & MEMBERSHIPS

- **Editorial Board Member** of Greener Journal of Physics and Natural Sciences, Greener Journal of Physical Sciences, Greener Journal of Chemical Sciences and Greener Journal of Sciences, Engineering and Technology Research.
- **Editorial Board Member** of International Journal of Wind and Renewable Energy (IJWRE)
- **Board of Advisory/ Reviewers** of International Journal of Applied Research & Studies, iJARS.
- International Journals of Engineering & Sciences (IJENS-RPG-Researchers Promotion Group) includes Editors, Reviewers, and Researchers. ID: IJENS-1389-Samsudin
- American Association of International Researchers (AAIR), Natural Sciences Member-AAIR Membership ID: NS-AAIR-1002 (International).
- International Society for Solid State Ionics Member (International)

AREA OF EXPERTISE

Solid State Ionics, Polymeric Materials, Applied Sciences, Physics and Chemistry.

RESEARCHER ID : C-6849-2014

SCOPUS ID : 54893526100

H-INDEX : 5

CITATION : 66

NAME OF AWARDS	TITLE	AWARD AUTHORITY	AWARD LEVEL	YEAR
Research Award	Industry Merit of Order	World Inventor Award Festival 2014 (KINEWS)	International	2014

Research Award	Materials Merit of Order	World Inventor Award Festival 2014 (KINEWS)	International	2014
Research Award	Final Nominee of 2014 Oronzio and Niccolò De Nora Young Author Prize	International Society of Electrochemistry (ISE)	International	2014
Research Foundation	Young Researcher Supporting Program	International Society For Solid State Ionics (ISSI) And Solid State Ionics-19 Committee (ISI-19, Japan)	International	2013
Research Award	Special Award	British Invention Show (BIS) 2012	International	2012
Research Award	Gold Medalist	British Invention Show (BIS) 2012	International	2012
Research Award	Motorola Innovation Award	Novel Research And Innovation Competition (NRIC) 2012	International	2012
Research Award	Gold Medalist	International Technology Expo (ITEX) 2012	International	2012
Research Award	Gold Medalist	Innovation@UMT 2012	University	2012
Research Award	Silver Medalist	SciTech 2012	University	2012
Research Award	Bronze Medalist	International Conference And Expositions On Inventions Of Higher Learning (PECIPTA) 2011	International	2011
Research Award	Bronze Medalist	BioMalaysia 2011	International	2011

PEER-REVIEWED ARTICLES IN JOURNALS

NO.	TITLE OF ARTICLE	AUTHOR	YEAR	JOURNAL NAME	VOL.	PAGES
1.	Biopolymer Materials Based Carboxymethyl Cellulose as a Proton Conducting Biopolymer Electrolyte for Application in Rechargeable Proton Battery	A.S. Samsudin , H.M. Lai and M.I.N. Isa	2014	Electrochimica Acta	138	1-13
2.	Conduction mechanism of enhanced CMC-NH ₄ Br biopolymer electrolytes	A.S. Samsudin and M.I.N Isa	2014	Advanced Materials Research	856	118-122
3.	<u>Study of Ionic Conduction Mechanism Based on Carboxymethyl Cellulose Biopolymer Electrolytes</u>	A.S. Samsudin and M.I.N. Isa	2014	Journal of The Korean Physical Society	65	1441-1447
4.	Contribution of Methyl Substituent on the Conductivity Properties and Behaviour of CMC-Alkoxy Thiourea Polymer Electrolyte	Saidatul Radhiah Ghazali, K. KuBulat, M.I.N. Isa, A. S. Samsudin & Wan M. Khairul	2014	Molecular Crystals and Liquid Crystals	604	126-141
5.	Synthesis and Characterization of Nitro Benzoyl Thiourea	Khalisah Asilah Mokhtar, Wan M.	2014	Phosphorus, Sulfur and Silicon	189	640-651

	Derivatives as Potential Conductive Thin Film	Khairul, M.I.N. Isa, A.S. Samsudin , Hasyiya Karimah Adli, Saidatul Radhiah Ghazali and Adibah Izzati Daud.				
6.	Conductive Biodegradable Film of <i>N</i> -octyloxyphenyl- <i>N'</i> -(4-methylbenzoyl) thiourea	Wan M. Khairul, M.I.N. Isa, A.S. Samsudin , Hasyiya Karimah Adli and Saidatul Radhiah Ghazali	2014	Bulletin of Materials Sciences	37	357-369
7.	Conductivity and transport properties study of plasticized carboxymethyl cellulose (CMC) based solid biopolymer electrolytes (SBE)	A.S Samsudin and M.I.N. Isa	2014	Advanced Materials Research	856	118-122
8.	Ionic conduction behaviour of CMC based green polymer electrolytes	A.S Samsudin and M.I.N. Isa	2013	Advanced Materials Research	802	194-198
9.	Investigation of a biodegradable polymer electrolytes based on carboxy methylcellulose and its potential application in solid-state batteries	A.S. Samsudin , J.P. Tham and M.I.N. Isa	2013	Advanced Materials Research	802	99-102
10.	Natural polymer electrolytes system based on Sago: Structural and transport behavior characteristic	A.S. Samsudin , M.I.A. Aziz, and M.I.N. Isa	2012	International Journal of Polymer Analysis and Characterization	17	600-607
11.	Characterization of carboxy methylcellulose doped with DTAB as a new types of biopolymer electrolytes	A.S. Samsudin and M.I.N. Isa.	2012	Bulletin of Materials Sciences	35 (5)	1-9
12.	Ionic Conductivity Study on Hydroxyethyl Cellulose (HEC) doped with NH ₄ Br Based Biopolymer Electrolytes	Y.K. Sit, A.S. Samsudin & M.I.N. Isa	2012	Research Journal of Recent Sciences	1 (11)	16-21
13.	Ionic conductivity and relaxation process in CMC-G.A solid biopolymer electrolytes.	M.F. Othman, A.S. Samsudin & M.I.N. Isa	2012	Journal of Current Engineering Research	2 (4)	6-10
14.	Ion Conducting Mechanism Of Carboxy Methylcellulose Doped With Ionic Dopant Salicylic Acid Based Solid Polymer Electrolytes	M.L.H. Rozali, A.S. Samsudin and M.I.N. Isa	2012	Int. J. of Applied Science & Technology	2 (4)	113-121

15.	Characterization on the potential of carboxy methylcellulose for application as proton conducting biopolymer electrolytes	A.S. Samsudin , Khairul, W.M. and M.I.N. Isa.	2012	Journal of Non-Crystalline Solids	358	1104-1112
16.	Structural and ionic transport study on CMC doped NH ₄ Br based a new types of biopolymer electrolytes	A.S. Samsudin and M.I.N Isa.	2012	Journal of Applied Sciences	12	174-179
17.	Structural And Electrical Properties Of Carboxy Methyl Cellulose-Dodecyltrimethyl Ammonium Bromide Based Biopolymer Electrolytes System	A.S. Samsudin and M.I.N Isa.	2012	International Journal of Polymeric Materials	61	30-40
18.	New types of biopolymer electrolytes: Ionic conductivity study on CMC doped with NH ₄ Br	A.S. Samsudin and M.I.N Isa.	2011	Journal of Current Engineering Research	1	7-11
19.	Investigation on the potential of proton conducting biopolymer electrolytes based methyl cellulose - glycolic acid	A. S. Samsudin , E. C. H. Kuan & M. I. N. Isa.	2011	International Journal of Polymer Analysis and Characterization	16	447-485
20.	Ionic conductive properties of cellulose derivative polymer electrolytes	A.S. Samsudin and M.I.N. Isa.	2015	Advanced Materials Research	ISI & Scopus	Accepted
21.	Ionic conduction mechanism on biopolymer electrolytes based carboxymethyl cellulose doped NH ₄ Br	A.S. Samsudin and M.I.N. Isa.	2014	Materials Science Poland	ISI & Scopus	Under review

PROCEEDINGS

NO.	TITLE OF ARTICLE	AUTHOR	YEAR	CONFERENCE	LOCATION	PAGES
1.	Preparation and performance analysis of CMC-NH ₄ Br based biopolymer electrolyte for electrochemical cell application	A.S. Samsudin , H.M. Lai and M.I.N. Isa	2013	Proceeding in The 19th International Conference on Solid State Ionics (SSI-19)	Kyoto, Japan	85
2.	Conduction Mechanism on Plasticized CMC Based Polymer Electrolytes	A.S Samsudin and M.I.N. Isa	2013	Proceeding in Universiti Malaysia Terengganu 12th International Annual Symposium (UMTAS) 2013	Terengganu, Malaysia	765
3.	Ionic conduction behavior of CMC based green polymer electrolytes	A.S Samsudin and M.I.N. Isa	2013	Proceeding in International Conference of Engineering, Applied	Bangkok, Thailand	232

				Sciences and Technology (ICEAST) 2013		
4.	Investigation of a biodegradable polymer electrolyte based on carboxy methylcellulose and its potential application in solid-state batteries	A.S. Samsudin , J.J.P. Tham and M.I.N. Isa	2013	Proceeding in International Conference of Engineering, Applied Sciences and Technology (ICEAST) 2013	Bangkok, Thailand	130
5.	The Novel Cellulose Based Solid Biopolymer Electrolytes Towards to Development of Electrochemical Energy: Ionic Conductivity, Structural and Transport Properties Study	A.S Samsudin and M.I.N. Isa	2013	Proceeding in Seminar Hasil Penyelidikan Sektor Pengajian Tinggi ke-3. EDC	Kedah, Malaysia	211
6.	Conduction mechanism of enhanced CMC-NH ₄ Br biopolymer electrolytes	A.S Samsudin and M.I.N. Isa	2013	Proceeding in 27th Regional Conference on Solid State Science and Technology (RCSST27)	Sabah, Malaysia	85
7.	Ionic Conductivity Studies On Carboxy Methylcellulose Based Biodegradable Polymer Electrolyte And Its Application In Electrochemical Cell	A.S. Samsudin , J.J.P. Tham and M.I.N. Isa	2012	Proceeding in Advanced Materials Conference (AMC 2012)	Langkawi, Malaysia	20
8.	Protonic Battery based on a CMC doped with Dodecyltrimethyl ammonium bromide based bio-polymer electrolytes	A.S. Samsudin , J.J.P. Tham and M.I.N. Isa	2012	Proceeding in AKEPT 2nd Global Annual Young Researchers Conference & Exhibition 2012	Melaka, Malaysia	65
9.	Electrical conduction in biopolymer electrolytes: temperature dependence mechanism	A.S Samsudin and M.I.N. Isa	2011	Proceeding in AYRC X3-1st AKEPT Young Researcher Conference (AYRC X3)	Kuala Lumpur, Malaysia	903
10.	The Electrical and Ionic Conductivity on Carboxy Methylcellulose –NH ₄ Br Based Biopolymer Electrolytes System	A.S Samsudin and M.I.N. Isa	2011	Proceeding in 7th IUPAC International Conference on Novel Materials and Synthesis (NMS-VII) & 21st International Symposium on Fine Chemistry and Functional	Shanghai, China	31

				Polymers (FCFP-XXI)		
11.	Methyl Cellulose – Glycolic Acid System: Study on the Potential as Proton Conducting Bio-Polymer Electrolytes	A.S. Samsudin , E. C. H. Kuan and M.I.N. Isa	2011	Proceeding in Universiti Malaysia Terengganu 10th International Annual Symposium (UMTAS) 2011	Terengganu, Malaysia	375
12.	Ionic Transport Study of CMC Based Proton Conducting Biopolymer Membrane	A.S Samsudin and M.I.N. Isa	2010	Proceeding in 3rd International Conference of Functional Materials and Devices (ICFMD-3)	Terengganu, Malaysia	120
13.	Electrical properties of CMC-DTAB based Biopolymer Electrolytes System	A.S Samsudin and M.I.N. Isa	2010	Proceeding in 23rd Symposium Kimia Analisis Malaysia (SKAM-23) 2010	Terengganu, Malaysia	131

OTHER PUBLICATION

NO.	TITLE OF ARTICLE	AUTHOR	YEAR	PUBLICATION NAME/ TYPE	VOL.	PAGES
1.	Green Materials Based On Carboxy Methylcellulose-Ammonium Bromide As Solid Bio-Polymer Electrolytes (GREEN CELL)	Mohd Ikmar Nizam B. Mohamad Isa and Ahmad Salihin B. Samsudin	2011	SciTech Discovery	Edition 01/2011- Volume 3 (ISSN 2180- 2025)	8-10
2.	Investigation of Carboxy Methylcellulose As Polymer Electrolytes Towards Green Technology	Ahmad Salihin B. Samsudin and Mohd Ikmar Nizam Bin Mohamad Isa	2011	SciTech Discovery	Edition 02/2011- Volume 3 (ISSN 2180- 2025)	12-14

RESEARCH PROJECT GRANTS

PROJECT NO.	PROJECT TITLE	ROLE	YEAR	SOURCE OF FUND	STATUS
PRGS 54245	Development and Performance of CAMBRO BEST: A Novel Cellulose Based Bio-Electrolytes Rechargeable Proton Battery	Co- Researcher	2014- 2016	Ministry of Education Malaysia (MOE)	On-going
FRGS 59319	Investigation Of Biopolymer Based Carboxymethyl Cellulose As Potential Advanced Materials For Solid Bio-Polymer Electrolytes: Part II- Structural, Optical, Thermal And Biodegradable Properties	Co- Researcher	2014- 2015	Ministry of Education Malaysia (MOE)	On-going

FRGS 59185	Conductivity, Electrical and Ionic Transport Study of Copolymer Based Carboxymethylcellulose As a Potential Advanced Material For Solid Bio-polymer Electrolytes	Co-Researcher	2010-2012	Ministry of Education Malaysia (MOE)	Completed (Awarded with best FRGS project 2010)
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PRESENTATION

NO.	TITLE OF ARTICLE	YEAR	CONFERENCE	LOCATION	TYPE OF PRESENTATION
1.	Preparation and performance analysis of CMC-NH ₄ Br based biopolymer electrolyte for electrochemical cell application	2013	The 19th International Conference on Solid State Ionics (SSI-19)	Kyoto, Japan	Oral
2.	Conduction Mechanism on Plasticized CMC Based Polymer Electrolytes	2013	12th International Annual Symposium (UMTAS) 2013	Terengganu, Malaysia	Oral
3.	Ionic conduction behavior of CMC based green polymer electrolytes	2013	International Conference of Engineering, Applied Sciences and Technology (ICEAST) 2013	Bangkok, Thailand	Oral
4.	Investigation of a biodegradable polymer electrolyte based on carboxy methylcellulose and its potential application in solid-state batteries	2013	International Conference of Engineering, Applied Sciences and Technology (ICEAST) 2013	Bangkok, Thailand	Oral
5.	Ionic Conductivity Studies On Carboxy Methylcellulose Based Biodegradable Polymer Electrolyte And Its Application In Electrochemical Cell	2012	Advanced Materials Conference (AMC 2012)	Langkawi, Malaysia	Oral
6.	Protonic Battery based on a CMC doped with Dodecyltrimethyl ammonium bromide based biopolymer electrolytes	2012	AKEPT 2nd Global Annual Young Researchers Conference & Exhibition 2012	Melaka, Malaysia	Oral
7.	Electrical conduction in biopolymer electrolytes: temperature dependence mechanism	2011	AYRC X3-1st AKEPT Young Researcher Conference (AYRC X3)	Kuala Lumpur, Malaysia	Oral
8.	The Electrical and Ionic	2011	7th IUPAC	Shanghai,	Poster

	Conductivity on Carboxy Methylcellulose –NH ₄ Br Based Biopolymer Electrolytes System		International Conference on Novel Materials and Synthesis (NMS-VII) & 21st International Symposium on Fine Chemistry and Functional Polymers (FCFP-XXI)	China	
9.	Methyl Cellulose –Glycolic Acid System: Study on the Potential as Proton Conducting Bio-Polymer Electrolytes	2011	Universiti Malaysia Terengganu 10th International Annual Symposium (UMTAS) 2011	Terengganu, Malaysia	Oral
10.	Ionic Transport Study of CMC Based Proton Conducting Biopolymer Membrane	2011	3rd International Conference of Functional Materials and Devices (ICFMD-3)	Terengganu, Malaysia	Poster
11.	Electrical properties of CMC-DTAB based Biopolymer Electrolytes System	2011	23rd Symposium Kimia Analisis Malaysia (SKAM-23) 2010	Terengganu, Malaysia	Poster