
NIK ROZLIN NIK MOHD MASDEK



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RESEARCH INTEREST

Main research interests are in electrochemistry and engineering aspects of metallurgical and materials engineering. Specific research areas of interest include:

- Nanocrystalline coatings
- Electrochemical Processes
- Corrosion of Nanostructured Thin Films and Coatings
- Electrochemical Behaviour of Bio-Implant Materials

EDUCATION/ACADEMIC QUALIFICATION/FIELD/INSTITUTION AND YEARS OF AWARD

- 1) **B. Eng (Hons) Biomaterial Engineering**
Universiti Malaya (1999 – 2003)
- 2) **MSc (Mechanical and Materials Engineering)**
Universiti Malaya (2005 – 2007)
- 3) **PhD (Advance Materials Engineering)**
University of British Columbia, Canada (2010 – 2014)

PROFESSIONAL MEMBERSHIP

- Member, Board of Engineers Malaysia
- Member, International Association of Engineers (IAENG)
- Member, Institute of Materials Malaysia (IMM)
- Member, Electron Microscopy Society Malaysia
- Member, Malaysian Tribology Society

ADMINISTRATIVE APPOINTMENT

- Koordinator Korporat Fakulti Kejuruteraan Mekanikal UITM
(1 Jan 2017 – 31 Januari 2022)
- AJK Induk CoRe Frontier Materials & Industry Application UITM
(1 Jan 2015 – 31 Disember 2017)
- AJK Penyelidikan, Perundingan & Penerbitan FKM (MYRA)
(1 Jan 2016 – 31 Disember 2016)

AJK Hal Ehwal Pelajar FKM
(1 Jan 2016 – 31 Disember 2016)

TEACHING AND LEARNING

NO	COURSES TAUGHT
1.	MEC481- Material Science Engineering
2.	MEC411- Strength of Materials
3.	MEC531- Mechanical Engineering Design I
4.	MEC532- Mechanical Engineering Design I I
5.	MEC424- Applied Mechanics Lab
6.	MEC681- Advance Materials Engineering
7.	MEC412- Engineering Statics
8.	KJM424- Basic Engineering
9.	MEC420- Dynamics

POST GRADUATE SUPERVISION

PhD and Masters Student - Ongoing

NO	NAME OF STUDENT
1.	Ain Athirah binti Rozali (Main supervisor)
2.	Syarifah Yunus (Co-supervisor)
3.	Mohamad Alif bin Aminudin (Co-supervisor)
4.	Nabila Nujaimi binti Ab Basir (Co-supervisor)
5.	Hamizi bin Kamal (Co-supervisor)

UNDER GRADUATE SUPERVISION

NO	NAME OF STUDENT
1.	Muhammad Farid Hilmi Mokhtar
2.	Wan Muhammad Aniq Aiman Wan Zainuddin
3.	Mohamad Hisyamudin Roslan
4.	Mohd Sorfian Hafiz Mansor
5.	Muhamad Firdaus Abdul razak
6.	Muhamad Zulfahmi Zainul Kharib
7.	Mohamad Alif Aminudin (Co-Sv)
8.	Muhamad Hafiz Mohd Salleh (Co-Sv)
9.	Munir Muhamad
10.	Nur Aiman Haiqal Mohamed Shafari (Co-Sv)

PUBLICATIONS

Selected Journal Papers

1. Nik Rozlin Nik Mohd Masdek, Muhammad Naufal Othman, Zuraidah Salleh, Zainal Abidin Kamarul Baharin, The Characterization of CoNi-Fe Coating in Different pH Environment, DOI:[10.35940/ijrte.d5183.118419](https://doi.org/10.35940/ijrte.d5183.118419)
2. ZA Kamarulbaharin, MAM Adzhar, AM Azmi, BSB Singh, NRN Masdek, Z Salleh, Experimental investigations on the effect of inverted cone condenser plate material and tilt angle on the solar still production under Malaysia conditions, International Journal of Recent Technology and Engineering (IJRTE) ISSN: 2277-3878, Volume-8, Issue-1, May 2019
3. NRN Masdek, Z Salleh, MH Koay, MA Ismail, Synthesis and characterization of Co-Mo alloy coating, IOP Conference Series: Materials Science and Engineering, 2018
4. Nik Rozlin Nik Masdek, Wan Muhammad Aniq Aiman, Mardziah Che Murad, Zuraidah Salleh, Koay Mei Hyie, The Effect of Saccharin Concentration on the Electrochemical Behaviour of Electrodeposited Nanocrystalline Cobalt-Iron Coating, PERTANIKA JOURNAL OF SCIENCE AND TECHNOLOGY, 2017
5. Kenaf/polypropylene key chain product fabricated by injection moulding, MH Koay, Z Salleh, N Masdek, S Budin, A Ngu - Journal of Physics: Conference Series, 2019
6. Koay Mei Hyie, Zuraidah Salleh, Nik Rozlin Nik Mohd Masdek, Yakub Md Taib, Anizah Kalam, Erosion Wear and Adhesive Investigation of Co-Ni-Fe Coated on Mild Steel, Materials Today: Proceedings, 2019
7. Nik Rozlin Nik Masdek, Ain Athirah Rozali, Mardziah Che Murad, Zuraidah Salleh, Effect of protein concentration on corrosion of Ti-6Al-4V and 316L SS alloys, ISIJ International, 2018
8. Nik Masdek, N.R., and Alfantazi, A.M. Electrochemical behavior of electrodeposited nanocrystalline CoFe alloy coating in 0.1M Na₂SO₄ with different pH and sulphide ion concentration. Submitted
9. Nik Masdek, N.R., and Alfantazi, A.M. (2014) An EQCM study on the influence of saccharin on the corrosion properties of nanostructured cobalt and cobalt-iron alloy coatings, Journal of Solid State Electrochemistry. doi:10.1007/s10008-014-2417-z
10. Nik Masdek, N.R., and Alfantazi, A.M. (2013) Electrochemical Properties of Electrodeposited Nanocrystalline Cobalt and Cobalt-Iron Alloys in Acidic and Alkaline

Solutions, Journal of Applied Electrochemistry, Volume 43, Issue 7, pp. 721-734. doi: 10.1007/s10800-013-0562-1

11. Nik Masdek, N.R., and Alfantazi, A.M. (2012) Nanocrystalline Cobalt-Iron Alloy: Synthesis and Characterization, Material Science and Engineering A, Volume 550, pp. 388–394. doi:http://dx.doi.org/10.1016/j.msea.2012.04.092
12. **Nik Rozlin Nik Masdek**, Iswadi Jauhari, Rd. Dadan Ramdan, and Rafidah Hasan, A Study on Properties and Kinetics of Carburizing Superplastic Duplex Stainless Steel, Key Engineering Materials Vols. 326-328 (2006) pp. 1677- 1680
Indexed in Scopus
13. **Nik Rozlin Nik Masdek**, Iswadi Jauhari , Rd. Dadan Ramdan and Rafidah Hasan, Enhancing Surface Properties of Fine Grain Duplex Stainless Steel via Superplastic Carburizing, Advanced Materials Research Vols. 15-17 (2006) pp. 768-773
Indexed in Scopus
14. Iswadi Jauhari, Shaifulazuar Rozali, **Nik Rozlin Nik Masdek**, Ogiyama Hiroyuki, Surface Properties and Activation Energy Analysis for Superplastic Carburizing of Duplex Stainless Steel, Materials Science and Engineering A: Vol 466 pp. 230-234 (Indexed in IEEE)
15. R. Hasan, I. Jauhari, S. M. Yunus, R. D. Ramdan and **N.R. Nik Masdek**, A Study on the Boronizing of Duplex Stainless Steel, Key Engineering Materials Vols. 306-308 (2006) pp. 887-891
Indexed in Scopus
16. Raden Dadan Ramdan, Iswadi Jauhari, Rafidah Hasan, **Nik Rozlin Nik Masdek**, Fadzil Ayad Zakaria, and K. Jamuna, The Effect of Carbonated Apatite Powder Size on the Coating Process of Carbonated Apatite on Titanium Alloy by Superplastic Deformation Process, Key Engineering Materials Vols. 326- 328 (2006) pp. 785- 788
Indexed in Scopus

Conference transaction and presentation

1. Nik Masdek, N.R., and Alfantazi, A.M., (2010) Review of Studies on Corrosion of Electrodeposited Nanocrystalline Metals and Alloys, ECS Transactions, 28, 249.

2. Nik Masdek, N.R., and Alfantazi, A.M., Synthesis of Nanocrystalline Cobalt-Iron Alloy and Its Characterization, 221st ECS Meeting, Seattle, Washington, May 2012.

Books

1. Jurnal Teknologi, Volume 76 No. 3, ISSN 2180-3722, Publisher: UTM Press, Editorial Board, 2015
2. Jurnal Teknologi, Volume 76 No. 11, ISSN 2180-3722, Publisher: UTM Press, Editorial Board, 2015

FUNDED RESEARCHES (GRANTS)

Current Researches

No.	Research Project	Source	Total Funds	Begin Year	End Year
1.	(Ref: 600-IRMI/FRGS 5/3 (159/2019) A CRITICAL ASSESSMENT OF ZINC HYDROXYAPATITE (ZNHA) AS A NEW BIOACTIVE CERAMIC IMPLANT MATERIAL	FRGS	RM83000	2019	2020
2.	(REF: 600-IRMI/PERDANA 5/3 BESTARI (070/2018) COMPRESSION AND DEGRADATION CHARACTERISTICS OF ZINC HYDROXPATITE CERAMIC AS BIO-IMPLANT METARIAL	PERDANA BESTARI	RM30000	2018	2019
3.	(REF: 600-IRMI/DANA 5/3/REI (11/2017) FAILURE MECHANISMS OF ALUMINIUM FOAM-BASALT FRP SANDWICH PANEL	DANA	RM32000	2017	2019
4	(REF: 100-IRMI/PRI 16/6/2 (005/2018) CORROSION RESISTANCE OF NANOCRYSTALLINE COBALT-NICKEL-IRON (CO-NI-FE) COATED MILD STEEL	INDUSTRI	RM136000	2017	2019

	PIPE COUPLING CASING (PART 1)				
5	(REF: 100-IRMI/PRI 16/6/2 (012/2017) AUTOMATIC MULTI CUTTING AND PRESSING MACHINE	PPRN	RM40500	2017	2018
6	(REF: 100-IRMI/PRI 16/6/2 (0049/2016) KNEADING AND DIVIDER MACHINE FOR PRODUCTION OF 'ROTI CANAI'	PPRN	RM29250	2016	2017
7	(REF: 600-RMI/FRGS 5/3 (0097/2016) STRENGTH FACTOR INVESTIGATION OF PNEUMATIC IMPACT TREATED WELDING JOINT	FRGS	RM97300	2016	2019
8.	(Ref: FRGS/1/2015/TK03/UITM/02/13) THE ELECTROCHEMICAL BEHAVIOR OF ELECTRODEPOSITED NANOCRYSTALLINE COBALT-IRON ALLOY COATINGS	FRGS	RM108,600	2015	2017
9.	(Ref:	FRGS	RM106,000	2015	2017

	FRGS/1/2015/TK05/UITM/02/6) EFFECT OF INFILTRATION FACTORS ON BIOMORPHIC SILICON CARBIDE CONVERTED FROM DIFFERENT WOOD POWDERS WASTE				
10.	(Ref: RAGS/1/2015/TK0/UITM/02/10) FUNDAMENTAL STUDY ON THE CORROSION BEHAVIOUR OF BIO- IMPLANT ALLOYS	RAGS	RM53,000	2015	2017
11.	(Ref: RAGS/1/2015/TK0/UITM/03/9) ANALYSIS OF STRESS REDUCTION DUE TO POST IMPACT AND OPEN HOLE TENSILE STRENGTH OF KENAF AND KENAF/FIBREGLASS HYBRID REINFORCED COMPOSITE	RAGS	RM53,000	2015	2017
12.	(Ref: 600-RMI/DANA 5/3/LESTARI (41/2015) WEAR AND CORROSION	LESTARI	20,000	2015	2017

	INVESTIGATION OF CO-NI-FE COATED ON MILD STEEL				
13.	(Ref: 600-RMI/DANA 5/3/LESTARI (111/2015) STUDY ON STRESS REDUCTION DUE TO POST IMPACT TENSILE STRENGTH OF KENAF HYBRID COMPOSITE	LESTARI	20,000	2015	2017
14.	(Ref: 600-RMI/DANA 5/3/LESTARI (67/2015) EFFECT OF IRON CONTENT ON THE CORROSION BEHAVIOUR OF NANOCRYSTALLINE COBALT-IRON ALLOY COATING	LESTARI	20,000	2015	2017
15.	(Ref: 600-RMI/FRGS 5/3 (55/2012) IN-SITU SINTERING OF HIGH TEMPERATURE ELECTRODEPOSITED COBALT-NICKEL-IRON NANOCOATING	FRGS	51,000	2012	2014
16.	(Ref: 600-RMI/ST/FRGS 5/3/Fst (167/2010) NEW PROPERTIES OF KENAF FIBER COMPOSITE USING IMPACT APPROACH	FRGS	40,490	2010	2013

17.	(Ref: 600-RMI/ST/FRGS 5/3/Fst (177/2010) MECHANISM STUDY OF THE CORROSION BEHAVIOUR OF ELECTRODEPOSITED NANOCRYSTALLINE COBALT AND ITS ALLOYS USING POTENTIODYNAMIC POLARIZATION	FRGS	51,000	2010	2012
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AWARDS

Diamond Award, Invention, innovation & Design Exposition 2016 (iidex), UiTM Shah Alam, 20 - 23 September 2016.

Project: Corrosion protection on heat- treated Co-Ni-Fe coated mild steel (Project leader)

Gold Award, Invention, innovation & Design Exposition 2016 (iidex), UiTM Shah Alam, 20 - 23 September 2016.

Project: Corrosion protection on heat- treated Co-Ni-Fe coated mild steel (Project leader)

Bronze Award, Invention, innovation & Design Exposition 2016 (iidex), UiTM Shah Alam, 20 - 23 September 2016.

Project: New rail slippers using kenaf based composite (Member)

Diamond Award, International Business Invention, Innovation and Design Competition 2016, UiTM Shah Alam, 1-2 Mac 2016.

Project: Co-Ni-Fe coating corrosion protective layer on mild steel (Project leader)

Sijil pencapaian cemerlang Pengajaran & Pembelajaran bagi penilaian Pro-Pens Sesi Mac-Julai 2015

Best Paper Award ICAME 2015

Diamond Award BIID 2016 (Co-Ni-Fe Coating Corrosion Protective Layer On Mild Steel)

REFERENCES

1. Prof. Akram Alfantazi
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309-6350 Stores Road
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