

Name: <u>Abdul Rahim Nihmiya</u>	
Current Position: Senior Lecturer (Gr II)/ Department of Civil & Environmental Technology, University of Sri Jayewardenepura	
Date of Joining the Establishment: 01/10/2018	
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About:: Dr. Nihmiya Abdul Rahim is associated with the Department of Civil and Environmental Technology, University of Sri Jayewardenepura since October 2018. Her specialization is in the area of Energy and Environmental Technology. She worked in Uva Wellassa University, Sri Lanka as Lecturer (Prob) from 2006 to 2011. She obtained her Bachelor degree in Chemical and Process Engineering in 2005 and Master degree in Medical Physics in 2013 from University of Peradeniya, Sri Lanka. In 2015, she obtained her doctorate in the field of Chemical Engineering from United Arab Emirates University, UAE. Dr. Nihmiya has several years of experience in undergraduate teaching. Her research interests are in Electrochemical reduction of CO ₂ , Energy conservation techniques, Renewable energy technologies, and Pollution control technologies	
ACADEMIC AND INDUSTRIAL EXPERIENCE	
October 2018 - to date	University of Sri Jayewardenepura Senior Lecturer Grade II
February 2016 - February 2017	College of Engineering, UAEU Post-Doctoral Fellow
April 2012- December 2015	Chem. & Petrl. Eng. Dept., UAEU Graduate Teaching Assistant
April 2011- April 2012	College of Engineering, UAEU Research Assistant
February 2006-April 2011	Uva Wellassa University, Sri Lanka Lecturer (Prob)
February 2005-February 2006	University of Peradeniya, Sri Lanka Assistant Lecturer
ACADEMIC QUALIFICATIONS	
2015	PhD in Chemical Engineering, United Arab Emirates University, Al Ain, UAE. Thesis: Modeling and experimental study of carbon dioxide absorption/stripping using gas liquid membrane contactor.
2013	M.Sc. Medical Physics, University of Peradeniya, Peradeniya, Sri Lanka, Thesis: Patient dose management in computed tomography and interventional fluoroscopy with special emphasis on paediatric patients.
2005	B.Sc. Engineering First-Class Honours (Chemical and Process Engineering), University of Peradeniya, Sri Lanka
TEACHING AREAS	

<ul style="list-style-type: none"> • Energy systems Technology
<ul style="list-style-type: none"> • Energy Management
<ul style="list-style-type: none"> • Cleaner Production Technologies
<ul style="list-style-type: none"> • Heat and Mass Transfer
PRESENT TEACHING SUBJECTS
<ul style="list-style-type: none"> • ETE 2081 Non Renewable Energy Systems Technology
<ul style="list-style-type: none"> • ETE 2142 Energy Efficiency and Conservation Techniques
<ul style="list-style-type: none"> • ETP 2091 Heat And Mass Transfer
<ul style="list-style-type: none"> • ETE 3202 Energy Auditing
<ul style="list-style-type: none"> • ETE 3441 Cleaner Production And Green Technologies
<ul style="list-style-type: none"> • ETE 4321 Biomass and Biofuel Energy Technology
SELECTED SUPERVISION OF STUDENT WORKS
Selected Postgraduate Supervision Works
<ol style="list-style-type: none"> 1. Jayarathne R.M.H.H. (Reading), Fabrication of novel metal impregnated gas-diffusion electrodes for the electrochemical reduction of carbon dioxide in aqueous solution, Master of Philosophy Thesis, University of Sri Jayewardenepura, Sri Lanka.
Selected Undergraduate Supervision Works
<ol style="list-style-type: none"> 1. M.B.D.K. Siriwardena (2022), Hydrogen Fuel Generation by HHO Generator Kit with Improvements and Applications as a Renewable Source, University of Sri Jayewardenepura, Sri Lanka. 2. R.G.S.B. Samarasinghe (2022), Utilization of waste tires to reduce the thermal conductivity of construction materials, University of Sri Jayewardenepura, Sri Lanka. 3. R.G.S.A. Ranthungha (2022), Design and Fabrication of a Small-Scale Biomass Briquetting Machine, University of Sri Jayewardenepura, Sri Lanka. 4. Dassanayake N.P. (2021): Boiler blowdown heat recovery in small scale industrial boilers, University of Sri Jayewardenepura, Sri Lanka. 5. Kumarapelee V.N. (2021): Design of a desalination plant based on solar evaporation condensation technique, University of Sri Jayewardenepura, Sri Lanka. 6. Vithanage G.H.V.I.U. (2021): Design of a bio filter with woodchips, rice husk & municipal compost as packing material for odour control during composting in Sri Lanka, University of Sri Jayewardenepura, Sri Lanka. 7. Sajath S.H.M. (2021): Handling the sludge when using poly aluminium chloride as the coagulant in potable water treatment process, University of Sri Jayewardenepura, Sri Lanka.
NUMBER OF RESEARCH STUDENTS
Undergraduate: 11 completed; 5 (reading) Postgraduate: 1 Technology project: 12
RESEARCH INTERESTS
<ul style="list-style-type: none"> • Modeling and simulation of chemical processes
<ul style="list-style-type: none"> • Separation processes
<ul style="list-style-type: none"> • Energy conservation techniques
<ul style="list-style-type: none"> • Renewable energy technologies
<ul style="list-style-type: none"> • Pollution control technologies
RESEARCH PROJECTS
Fabrication of novel metal impregnated gas-diffusion electrodes for the electrochemical reduction of carbon dioxide in aqueous solution (3 Yrs) (PI) Value (LKR): 4.3 Mn Funding source: University of Sri Jayewardenepura, Sri Lanka.

Norwegian grant for the development of research-based education for renewable energy technology in the circular economy

Value (NOK): 493000

Funding source: Norwegian Directorate for Higher Education and Skills

RESEARCH PUBLICATIONS

1. Abdul Rahim Nihmiya, Nayef Ghasem, Application of amines for natural gas sweetening, *Advances in Natural Gas*, Elsevier (pending)
2. Abdul Rahim Nihmiya, Nayef Ghasem, Modelling and simulation of natural gas sweetening using membranes, *Advances in Natural Gas*, Elsevier (pending)
3. M.B.D.K. Siriwardena, A.R. Nihmiya, Hydrogen Fuel Generation by HHO Generator Kit with Improvements and Applications as a Renewable Source, *ICIET(2022)* (accepted)
4. R.G.S.B. Samarasinghe, A.R. Nihmiya, Utilization of waste tires to reduce the thermal conductivity of construction materials , *ICIET(2022)* (accepted)
5. R.G.S.A. Ranthungha, A.R. Nihmiya, Design and Fabrication of a Small-Scale Biomass Briquetting Machine, *ICIET(2022)* (accepted)
6. Abdul Rahim Nihmiya, Nayef Ghasem, *Introduction to safe design and standards, Crises in Oil, Gas and Petrochemical Industries Loss Prevention and Disaster Management* 1st Edition - March 1, 2023 Elsevier (Imprint)
7. Abdul Rahim Nihmiya, Nayef Ghasem, *Environmental effects of dust release from oil, gas and petrochemical units, Crises in Oil, Gas and Petrochemical Industries Disasters and Environmental Challenges* 1st Edition - March 1, 2023 Elsevier (Imprint)
8. R Jayarathne, AR Nihmiya, A Nilmini, P Pitigala, LOW-COST MACROPOROUS LAYER FOR GAS DIFFUSION ELECTRODE, *10TH YSF SYMPOSIUM (2022)*, 45
9. R Jayarathne, AR Nihmiya, A Nilmini, P Pitigala, Characterization of Gas Diffusion Layers for Electrochemical Reduction of CO₂, *2021 From Innovation To Impact (FITI) 1*, 1-4
10. AR Nihmiya, Passive Daylighting Systems, *Advances in Technology 2021*, 373-376
11. NA Rahim, Overview of Absorbents used in Gas Liquid Membrane Contactor for CO₂ absorption, *J. Res. Technol. Eng.* 2 (3) , 2021, 18-32
12. NM Ghasem, NA Rahim, M Al-Marzouqi., Carbon Capture From Natural Gas via Polymeric Membranes, *Encyclopedia of Information Science and Technology*, Fourth Edition, 3043-3055 (2018)
13. N Ghasem, MA Marzouqi, NA Rahim., Removal of cadmium from industrial wastewater using water-soluble polymer via hollow fiber membranes, *Int J Petrochem Sci Eng*, 2016 1 (4), 88-90
14. NA Rahim., Nayef Ghasem, Mohamed Al-Marzouqi., Modeling and Simulation of CO₂ Stripping from Potassium Glycinate Solution Using Polymeric Membrane Contactor *American Journal of Polymer Science*, 2016 6 (2), 29-38
15. Rahim, N.A., Ghasem, N., Al-Marzouqi, M.H., Absorption of CO₂ from natural gas using different amino acid salt solutions and regeneration using hollow fiber membrane contactors. *Journal of Natural Gas Science and Engineering*, 2015. 26: p. 108-117.

16. Rahim, N.A., Ghasem, N., Al-Marzouqi, M.H., Regeneration of potassium glycinate used for CO₂ absorption using hollow fiber membrane contactors, UAEGSRC2015 graduate student research conference, 22-24 March, 2015, Abu Dhabi, UAE
17. Rahim, N.A., Ghasem, N., Al-Marzouqi, M.H., Stripping of CO₂ from different aqueous solvents using PVDF hollow fiber membrane contacting process. Journal of Natural Gas Science and Engineering, 2014. 21(0): p. 886-893.
18. Ghasem, N., Al-Marzouqi, M.H., Rahim, N.A., Absorption of CO₂ Form Natural Gas via Gas-liquid PVDF Hollow Fiber Membrane Contactor and Potassium Glycinate as Solvent. Jurnal Teknologi, 2014. 69(9).
19. Ghasem, N., Al-Marzouqi, M.H., Rahim, N.A., Modeling and Simulation of Membrane Contactor employed to strip CO₂ from Rich Solvents via COMSOL. September 17-19, 2014, Cambridge, UK.
20. Ghasem, N., Al-Marzouqi, M.H., Rahim, N.A., Modeling of CO₂ absorption in a membrane contactor considering solvent evaporation. Separation and Purification Technology, 2013. 110: p. 1-10.
21. Ghasem, N., Al-Marzouqi, M.H., Rahim, N.A., Simulation of Gas/Liquid Membrane Contactor with COMSOL Multiphysics. COMSOL conference, WTC Rotterdam, Netherlands. October 23 - 25, 2013. Session: Chemical reaction engineering II.
22. Ghasem, N., Al-Marzouqi, M.H., Rahim, N.A., Absorption of acid gas via gas-liquid membrane contactors and potassium glycinate as solvent. The 2nd international conference on water energy & environment 2013. September 21-24, 2013 Kusadasi, Turkey.
23. Ghasem, N., Al-Marzouqi, M.H., Rahim, N.A., Absorption of CO₂ from natural gas utilized gas-liquid PVDF hollow fiber membrane contactors via potassium glycinate solvent. 11th International conference on membrane science and technology, Seri pacific hotel, Kuala Lumpur, 27-29th August 2013.
24. Ghasem, N., Al-Marzouqi, M.H., Rahim, N.A., Effect of polymer extrusion temperature on poly (vinylidene fluoride) hollow fiber membranes: properties and performance used as gas-liquid membrane contactor for CO₂ absorption. Separation and Purification Technology, 2012. 99: p. 91-103.

AWARDS / HONOURS AND SCHOLARSHIPS

- Phd research grant (80,000 AED) (Faculty of Engineering, UAEU)
- Graduate teaching assistantship (Faculty of Engineering, UAEU from Apr 2012 to Dec 2015)
- Graduate research assistantship (UAEU, from Apr 2011 to Apr 2012)
- Bienco-Link Carbons prize for the best performance in Chemical & Process Engineering (2005 convocation, University of Peradeniya)

PROFESSIONAL MEMBERSHIPS

- Associate Member, Institute of Engineers Sri Lanka (AMIESL)
- Associate Member of Sri Lanka Energy Managers Association

TRAININGS

- Certificate Course in Teaching in Higher Education (CTHE) (2020) (SDC/USJ)
- CPD course on Energy Management (2021) (IESL)
- Training course on Biogas Technology in the Treatment and Utilization of Agricultural Waste (2022) (Ministry of Commerce, People's Republic of China)

- Training course on Clean Energy Application Technology for Developing Countries (2022) (Ministry of Commerce, People’s Republic of China)

PROFESSIONAL DUTIES

Academic

- Academic coordinator for Energy and Environmental Technology (2020-2021)
- Industrial Training coordinator for Engineering Technology Degree Programme (2019-2020)
- Member of curriculum review committee (2022- to present)
- Industrial Training internal supervisor (2019- to present)
- Academic Student Counsellor (2021-to present)

Other

- A member of corporate plan committee, Faculty of Technology, University of Sri Jayewardenepura (2019-2021)
- Editorial Board Member of the Advances in Technology
- Publication co- chair of ICIET 2021
- Program co – chair of ICIET 2022
- Senior Treasurer of Muslim Majlis, University of Sri jayewardenepura
- Editorial Board Member of SLEMA Journal
- Member of several procurement committees
- Reviewer for several research grants and research papers
- Member of National Environment Action plan 2021-2030
- Jury member of "Sahasak Nimavum" National Invention and Innovation competition-2021
- Memembr of SLEMA “Annual Award for the Most Outstanding Undergraduate Energy Research 2021’ committee
- Chairperson of SLEMA “Annual Award for the Most Outstanding Undergraduate Energy Research 2022’ committee
- Memembr of SLEMA hydrogen working group
- Member of Hydrogen Energy proposal submitted to ADB by SLEMA
- Published paper articles:
HYDROGEN: A VIABLE RENEWABLE FUEL FROM WATER (Sunday Observer, April 3 2022)
Biogas System Technology – An alternative approach to contemporary problems (Sunday Observer, July 3 2022)

RESEARCH AND SOCIAL MEDIA PROFILES

ResearchGate	https://www.researchgate.net/profile/Nihmiya-Rahim
Google Scholar	https://scholar.google.com/citations?user=ETf-B7IAAAAJ&hl=en&oi=ao