

1. PERSONAL DATA

Name : Dr. Sheikh Abdul Rezan Bin Sheikh Abdul Hamid

Nationality : Malaysia

Current Position : Lecturer

Qualifications : PhD (Pyrometallurgy), UNSW, Australia -2010
MSc (Optical Engineering), Universiti Teknologi Malaysia - 2001
B.Sc (Ceramic Engineering), Alfred University, USA -1999

Field of specialization : Carbothermal Reduction of Metal Oxide
Thermodynamic and Kinetic Modelling
Synthesis of Metal Carbide and Nitride

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2. ACHIEVEMENTS

On going grants : 1

Completed grants : 5

Graduated students :3

Postgraduate under supervision :2

Patents/ Copyrights/ Filing : Nil

Achievements/Awards / Recognitions :1. IntelScholarship Award, 2000-2001
2. Phd Scholarship Award, 2003-2009 (RLKA USM)
3. Editor for Asean Journal of Engineering
4. Reviewer for Journal of Metallurgy
5. Reviewer for Malaysian Microscopy Journal
6. Reviewer for Advance Material Research Journal
7. Reviewer for Desalination and Water Treatment

Research ID : <http://www.researcherid.com/rid/G-4638-2011>

Goggle Scholar ID : <http://scholar.google.com.my/citations?user=vkIE4UQAAAAJ>

Scopus ID : 49862048200

2. RESEARCH PROJECTS

I. Completed Research Projects for the last three years

No.	Title of research	Grant's Name	Duration	Start Date	End Date
1	Reduction of Malaysian Iron Ore With Coal	Postgraduate incentive grant	2 years	Jan 2010	Jan 2012 (completed)
2	Sustainable Processing of EAF Slag as an Agricultural Fertilizer	USM incentive grant (304/JPNP/600004)	1 year	Mar 2011	Mar. 2012 (completed)
3	Synthesis And Characterization Of EAF Refractory For Steelmaking	An Joo Steel Berhad, Geran Penyelidikan	0.5 year	Jan. 2012	Jun. 2012 (completed)
4	Leaching of Potassium from Calcined and Reduced K-Feldspar	Sibelco Malaysia Sdn Bhd Geran Penyelidikan (U464)	0.5 year	Feb. 2012	Sept. 2012 (completed)
5	Thermodynamic and Kinetic Studies of Titanium Oxycarbonitride Formation in Malaysian Ilmenite Ores	Fundamental research grant scheme, co-leader (203/PBAHAN/6071230)	2 years	Jun. 2012	May 2014

II. Ongoing Research Projects for the last three years

No.	Title of research	Grant's Name	Duration	Start Date	End Date
1	Synthesis and Characterization of Glass Fertilizer from Electric Arc Furnace (EAF) Slag	AUN/SEED NET (304/PBAHAN/6050221)	3.0 years	Sept. 2012	Sept. 2014
2	Crystallization and Leaching behavior of Potassium Silicate Fertilizer from Malaysian Electric Arc Furnace Slag	USM Short Term (304/PBAHAN/60312002)	2.5 years	Jan. 2012	Sept. 2014

4	Thermodynamic and Kinetic Study of Chlorination of Nitrided Malaysian Ilmenite Ores	Fundamental research grant scheme, project leader (203/PBAHAN/6071261)	3 years	Dec. 2013	Dec. 2016
5	Crystallization of Potassium Silicate from Malaysian Electric Arc Furnace Steel Slag for Agriculture Fertilizer Applications	Geran Penyelidikan Siswazah Universiti Penyelidikan (RU-PRGS) 1001/PBAHAN/8045015	3 years	Nov. 2012	Jul. 2015

3. RESEARCH PUBLICATIONS for the last 5 years (include journals, books, chapter in books etc.)

International Journals

1. **Sheikh Abdul Rezan**, G. Zhang, and O. Ostrovski, "Carbothermal Reduction and Nitridation of Titania in Hydrogen-Nitrogen Gas Mixture", Journal of American Ceramic Society, 2011, **94**(11): p. 3804-3811 (ISI cited, impact factor 2013: 2.428).
2. **Sheikh Abdul Rezan**, G. Zhang, and O. Ostrovski, "Carbothermal Reduction and Nitridation of Primary Ilmenite Concentrate in Different Gas Atmosphere", Metallurgical Transaction B, 2012, **43**(1): p. 73-81 (ISI cited, impact factor 2013: 1.323).
3. **Sheikh A. Rezan**, G. Z. and O. Ostrovski (2012). "Carbothermal Reduction and Nitridation of Ilmenite Concentrates" International Steel Institute of Japan (ISIJ), 2012. **52**(3): p. 363-368 (ISI cited, impact factor 2013: 1.15).
4. **Sheikh A. Rezan**, G. Zhang, and O. Ostrovski, Phase Development in Carbothermal Reduction and Nitridation of Ilmenite Concentrates. High Temperature Materials and Processes 2012. **31.4-5** (Special issue: Thermodynamics and Kinetics of Materials Processing): p. 381-388 (ISI cited, impact factor 2013: 0.346).
5. L. K. Bankole, **Sheikh Abdul Rezan**, and N. M. Sharif:, Thermodynamic Modeling of Mineral Phases Formation in EAF Slag System and its Application as Agricultural Fertilizer. SEASI Quarterly Journal 2012. **40**(4): p. 7 (Scopus cited).
6. Wan Normiza Wan Mustapha, **Sheikh Abdul Rezan**, et al., Synthesis and Gas Sensing Properties of SnO₂ Nanostructures by Thermal Evaporation. Advanced Materials Research, 2012. **620**: p. 350-355 (Scopus cited)

7. Lateef Kolawole Bankole, **Sheikh Abdul Rezan** and N.M. SHARIF, Crystallization of Potassium Calcium Silicate from Modified Industrial EAF Slag. *Advanced Materials Research*, 2012. **620**: p. 66-71(Scopus cited)
8. Lateef Kolawole Bankole, **Sheikh Abdul Rezan**, N.M. Sharif, and N. Baharun, Solubility Study of Industrial EAF Steel Slag in Acidic and Alkaline Media. *Advanced Materials Research*, 2013 (Scopus cited)
9. Lateef Kolawole Bankole, **Sheikh Abdul Rezan** and N.M. Sharif ,Assessment of EAF Steel Slag Solubility by Statistical Design. *Advanced Materials Research*, 2013 (Scopus cited)
10. Hasniyati, M.R., H. Zuhailawati, S. Ramakrishnan, and **Sheikh Abdul Rezan**, Mechanism and optimization of titanium carbide-reinforced iron composite formation through carbothermal reduction of hematite and anatase. *Journal of Alloys and Compounds*, 2013. **587**: p. 442-450 (ISI cited, impact factor 2013: 2.390).
11. Sharifah, A.S.S., H.S. Saidin, N. Baharun, **Sheikh Abdul Rezan**, and H. Hashim, *Microstructural Study of Reduced Malaysian Ilmenite by Carbothermal Reduction and Nitridation in Nitrogen Atmosphere*. *Advanced Materials Research*, 2014. **858**: p. 265-271 (Scopus cited).
12. Saidin, H.S., S. Salim, N. Baharun, **Sheikh Abdul Rezan**, and H. Hashim, *An Assessment of the Carbothermal Reduction of Malaysian Ilmenite by Statistical Design*. *Advanced Materials Research*, 2014. **858**: p. 221-227 (Scopus cited).
13. L K Bankole, **Sheikh Abdul Rezan**, and N.M. Sharif, *Assessment of hexavalent chromium release in Malaysian electric arc furnace steel slag for fertilizer usage*. *IOP Conference Series: Earth and Environmental Science*, 2014. **19**(1): p. 012004 (Scopus cited), <http://dx.doi.org/10.1088/1755-1315/19/1/012004> .
14. Sereiratana, E., K.A. Bharum, **Sheikh Abdul Rezan**, R. Othman, F. Takahashi, and P. Bone, *Comparison of Silica Sand Properties from Kandal Province, Cambodia and Tapah, Perak, Malaysia and Characterization of Soda Lime Silicate Glass Produced From Cambodian Silica Sand*. *Advanced Materials Research*, 2014. **858**: p. 248-253 (Scopus cited).
15. Maisara Azad Mat Akhir, K. Mohamed, **Sheikh Abdul Rezan**, S.D. Hutagalung, W.N.W. Mustapha, N.V. Hieu, C.K. You, A.S.M.A. Haseeb, and W.Y. Hoon, *Synthesis And Gas Sensing Properties Of SnO₂ Nanostructures In Ethanol And Carbon Monoxide Gases*. *Australian Journal of Basic and Applied Science* 2014 (Special issue ICBST 2014 International Conference on Business, Science and Technology): p. 6 (Scopus cited).

Proceedings:

1. Shoparwe, N.I., O.P. Ling, N.N. Nazri, N.S. Ismail, **Sheikh Abdul Rezan**, Norlia Binti Baharun, K.S.B. Ariffin, H.B. Hussin, M.N.A. Fauzi, S.A.L. Ramakrishnan, M.N. Murat, and H.B. Arifin, *Synthesis of Iron and Titanium Oxycarbonitride (TiO_xC_yN_z)*

from Malaysian Ilmenite Ores, in *International Conference on Functional Materials and Metallurgy 2014*, Unimap: Flamingo Hotel, Penang. p. 7.

2. Nurul Syazwina Binti Che Ibrahim, S.R., Norlia binti Baharun, **Sheikh Abdul Rezan**, R. Alizadeh, and P. Roohi, *Nonisothermal Kinetic Modelling For Hydrogen Reduction of Ferric Oxide Using Matlab*, in *International Conference on Functional Materials and Metallurgy 2014* [2014, Unimap: Flamingo Hotel, Penang. p. 6.
3. Maisara Azad Mat Akhir, K. Mohamed, **Sheikh Abdul Rezan**, S.D. Hutagalung, W.N.W. Mustapha, N.V. Hieu, C.K. You, A.S.M.A. Haseeb, and W.Y. Hoong, *Synthesis And Gas Sensing Properties Of SnO₂ Nanostructures In Ethanol And Carbon Monoxide Gases*, in *International Conference on Business, Science and Technology*, I.D.M. Jaafar, Editor 2014, International Postgraduate Network: Hatyai, Thailand. p. 6.
4. Nur Shafiqah Ismail, **Sheikh Abdul Rezan** Norlia Binti Baharun, Lateef K. Bankole, Hanizam Shah Saidin, Kamar Shah Bin Ariffin, Hashim Bin Hussin, Sivakumar A/L Ramakrishnan, And H.B. Arifin, *Phase and Morphology Development in Carbothermal Reduction and Nitridation of Malaysian Ilmenite*, in *Mineral Symposium 2013*, Minerals And Geoscience Department (JMG): Kinta Riverfront Hotel Ipoh, Perak. p. 7.
5. Sereiratana Em, **Sheikh Abdul Rezan**, Radzali Othman, et.al. (2013), *Characterization of Cambodian and Malaysian Silica Sand Properties for Glassmaking*, in 5th AUN/SEED-Net Regional Conference on Natural Resources and Materials (RC-NRM). 2013, Aunseednet: Penang, Malaysia. p. 4.
6. Lateef K. Bankole, **Sheikh Abdul Rezan**, et al., *A Study of the Solubility of Industrial EAF Steel Slag in Acidic and Alkaline Media*, in 5th AUN/SEED-Net Regional Conference on Natural Resources and Materials (RC-NRM). 2013, Aunseednet: Penang, Malaysia. p. 4.
7. Saidin, H.S., **Sheikh Abdul Rezan** et al., *Microstructural Study of Reduced Malaysian Ilmenite by Carbothermal Reduction and Nitridation of in Nitrogen Atmosphere*, in 5th AUN/SEED-Net Regional Conference on Natural Resources and Materials (RC-NRM). 2013, Aunseednet: Penang, Malaysia. p. 4.
8. Tan Weng Giap, S.R., **Sheikh Abdul Rezan**, et al., *Kinetic Modeling For Hydrogen Reduction Of Ferric Oxide Using Matlab*, in *International Conference on Science, Technology and Social Sciences (ICSTSS2012)*, A. Kassim, Editor. 2012: Kuantan, Pahang, Malaysia. p. 5.
9. Lateef Kolawole Bankole, **Sheikh Abdul Rezan** and N.M. Sharif, *Crystallization of Potassium Calcium Silicate from Modified Industrial EAF Slag*, in *International Conference on X-Rays & Related Techniques & Industry 2012 (ICXRI 2012)*. 2012, X-Ray Application Malaysia Society (XAPP) Penang, Malaysia.
10. Wan Normiza Wan Mustapha, **Sheikh Abdul Rezan**, et al., *Synthesis and Gas Sensing Properties of SnO₂ Nanostructures by Thermal Evaporation*, in *International Conference on X-Rays & Related Techniques & Industry 2012 (ICXRI 2012)*. 2012, X-Ray Application Malaysia Society (XAPP) Penang, Malaysia.

11. Zhang G., Ostrovski O., Adipuri A., Dewan M.A.R., **Sheikh Abdul Rezan** (2011) Development of an Alternative Technology of Ilmenite Processing. The 12th World Conference on Titanium, 19-24 June, 2011, Beijing China.
12. Ostrovski, O., Zhang, G., Dewan, M.A., **Sheikh Abdul Rezan**, and A. Adipuri, A new technology for production of titanium tetrachloride, in EUROMAT, J.-M. Chaix, Editor. 2011, Federation of European Materials Societies (FEMS): Montpellier, France. p. 4.
13. Hanizam Shah Saidin, **Sheikh Abdul Rezan**, et al. (2011). Characterization of Malaysian iron ore. Geology, Geotechnology and Mineral Resources of INDOCHINA Conference K. K. University. Kosa Hotel, Khon Kaen, Thailand.
14. Sharifah Aishah, **S.A. Rezan**, and H. Hussin, Synthesis of Titanium Oxycarbonitride by Carbothermal Reduction and Nitridation of Malaysian Ilmenite in Nitrogen Atmosphere, in 4th AUN/SEED-Net Regional Conference on Natural Resources and Materials (RC-NRM) and MetCon 2011, Aunseednet: Subic Bay, Philippines, p. 16.
15. Lateef K. Bankole, **S.A. Rezan**, and N.M. Sharif, Crystallization behaviors of Potassium Silicate from EAF Slag, in Joint Research Seminar between Universiti Sains Malaysia & Nagaoka University of Technology Japan. 2011, USM: Penang. p. 2.
16. Lateef K. Bankole, **Sheikh Abdul Rezan** and N. M. Sharif (2011). Thermodynamic Modeling of Mineral Phases Formation In EAF Slag System And Its Application As Agricultural Fertilizer. **SEASI Conference**. Resorts World Sentosa, Singapore, South East Asia Iron and Steel Institute.
17. Hanizam Shah Saidin, H. Hussin and **Sheikh Abdul Rezan**, Characterization and Processing of Low Grade Iron Ore and Coal for Reduction Process, in 3rd RC-NRM (Regional Conference Interdisciplinary on Natural Resources and Materials Engineering). 2010, USM: Langkawi.
18. **Sheikh Abdul Rezan**, A. Adipuri, G. Zhang, and O. Ostrovski: "Carbothermal Reduction and Nitridation of Ilmenite Concentrates and Chlorination of the Reduced Samples", XXV International Mineral Processing Congress (IMPC 2010), Brisbane, Australia, 2010.
19. **Sheikh Abdul Rezan**, G. Zhang, and O. Ostrovski: "Synthesis of Titanium Oxycarbonitride by Carbothermal Reduction of Titania in Nitrogen Containing Gas Mixtures", Proceeding of 11th World Conference Titanium 2007, Kyoto, Japan, 2007.
20. G. Zhang, D. Liu, M.A.R. Dewan, **Sheikh Abdul Rezan** and O. Ostrovski: "Reduction of Alumina and Titania in Different Gas Atmospheres", Proceeding of European Metallurgical Conference EMC 2007; Zinc and Lead, Light Metals, General Hydrometallurgy, Dusseldorf, Germany, 2007
21. R. Alizadeh, E. Jamshidi, H. Ale Ebrahim and **Sheikh Abdul Rezan** (2007). Thermodynamic considerations of methane power in metal oxide reduction reactions. 5th Iranian Int. Chem. Eng Congress. Kish Island, Iran.