

## Assoc. Prof. Dr. Hadi Nur

[The information of this curriculum vitae is as of 8 December 2009. The latest information can be accessed through my personal homepage. Please visit <http://www.hadinur.com>]



Born in Bukittinggi on 6 May 1969  
B.Sc. (1992) Institut Teknologi Bandung (ITB)  
M.Eng. (1995) Institut Teknologi Bandung (ITB)  
Ph.D. (1998) Universiti Teknologi Malaysia (UTM)  
Postdoc (1998-1999) Universiti Teknologi Malaysia (UTM)  
JSPS Postdoc Fellow (1999-2001) Hokkaido University, Japan  
COE Visiting Researcher (2001-2002) Hokkaido University, Japan  
Research Officer (2002-2003) Universiti Teknologi Malaysia (UTM)  
Lecturer (2003-2007)  
Senior Lecturer (2007-2008)  
Associate Professor (2008 – present)  
Ibnu Sina Institute for Fundamental Science Studies  
Universiti Teknologi Malaysia  
81310 UTM Skudai, Johor, Malaysia.  
e-mail: [hadi@kimia.fs.utm.my](mailto:hadi@kimia.fs.utm.my)  
[hadi@ibnusina.utm.my](mailto:hadi@ibnusina.utm.my)

### Personal

- Sex: Male
- Place and date of birth: Bukittinggi, 6 May 1969
- Nationality: Indonesian
- Passport No: N527526

### Education

- Ph.D. program, Department of Chemistry, Universiti Teknologi Malaysia (UTM): December 1995 - May 1998. Ph.D. in zeolite chemistry and catalysis.
- Graduate Program of Materials Science and Engineering, Institut Teknologi Bandung (ITB): September 1993 – February 1995. Magister of Engineering in Materials Science and Engineering (*Cum Laude*).
- Faculty of Dentistry, Padjadjaran University, 1988 - 1989 (only for one year).
- Department of Chemistry, Institut Teknologi Bandung (ITB): September 1987 - October 1992. First degree in Chemistry.
- SMA 3 Padang, West Sumatera (senior high school): 1984 – 1987.
- SMP Adabiah Padang, West Sumatera (secondary school): 1981 – 1984.
- SD PPSP IKIP Padang, West Sumatera (elementary school): 1976 – 1981.

---

### **Administrative Position**

- Head of Catalytic Science and Technology (CST) Research Group, Universiti Teknologi Malaysia (2009-present).
- Regional Manager of International Affairs for Indonesia, Universiti Teknologi Malaysia (2008-present).

### **Academic Career**

- Associate Professor (2008 – present), Ibnu Sina Institute for Fundamental Science Studies, Universiti Teknologi Malaysia.
- Senior Lecturer (2007 – 2008), Ibnu Sina Institute for Fundamental Science Studies, Universiti Teknologi Malaysia.
- Lecturer (2003 – 2007), Ibnu Sina Institute for Fundamental Science Studies, Universiti Teknologi Malaysia.
- Research Fellow, Ibnu Sina Institute for Fundamental Science Studies, Universiti Teknologi Malaysia: May 2002 – May 2003.
- COE (Center of Excellent) Visiting Researcher, Laboratory of Catalytic Reaction Chemistry, Catalysis Research Center, Hokkaido University: November 2001 – March 2002.
- JSPS (Japan Society for the Promotion of Science) Postdoctoral Fellow, Laboratory of Catalytic Reaction Chemistry, Catalysis Research Center, Hokkaido University: November 1999 – October 2001.
- Postdoctoral Fellow, Department of Chemistry, Universiti Teknologi Malaysia (UTM): September 1998 – October 1999.

### **Awards and Recognitions**

- Visiting Associate Professor at Department of Chemistry, Institut Teknologi Bandung from 15 to 20 November 2009.
- Keynote speaker at the national seminar on chemistry and chemistry education organized by Universitas Negeri Semarang held in 10 October 2009, in Puri Garden Hotel, Semarang, Indonesia.
- Invited speaker at Workshop on Catalysis, Department of Chemistry, Institut Teknologi Sepuluh Nopember (ITS), Surabaya, 25 August 2008.
- Universiti Teknologi Malaysia (UTM) Publication Award (International publication category), 2007.
- External examiner of PhD thesis from Department of Inorganic Chemistry, University of Madras, India (2008).
- Universiti Teknologi Malaysia (UTM) Publication Award, 2006 (Anugerah Penerbitan UTM Tahun 2006).
- Keynote speaker at Seminar Nasional Kimia IX (National Seminar on Chemistry IX) at Institut Teknologi Sepuluh Nopember (ITS), Surabaya, Indonesia, 24 July 2007.
- Invited to give lecture at Graduate School of Engineering Science, Osaka University, 11 June 2007.
- Universiti Teknologi Malaysia (UTM) Excellent Service Award, 2005 (Anugerah Perkhidmatan Cemerlang UTM Tahun 2005).
- Poster Award Winner (First place), Annual Fundamental Science Seminar, 6-7 June 2006, Universiti Teknologi Malaysia.
- Paper entitled "Preparation and characterization of bifunctional oxidative and acidic catalysts Nb<sub>2</sub>O<sub>5</sub>/TS-1 for synthesis of diols" by D. Prasetyoko, Z. Ramli, S. Endud and

- 
- H. Nur published in *Materials Chemistry and Physics*, 93 (2005) 443-449, has been listed as Hottest article on Science Direct on March 2006.
- The Academy of Sciences for the Developing World (TWAS) Grants in Basic Sciences - Trieste, Italy (2005).
  - Who's Who in Science and Engineering, Marquis, U.S.A., 9th Edition, 2006-2007.
  - Who's Who in the World, Marquis, U.S.A., 23rd Edition, 2006.
  - Who's Who in the World, Marquis, U.S.A., 24rd Edition, 2007.
  - Who's Who in the World, Marquis, U.S.A., 25th Edition, 2008.
  - Invited to give lecture on "Scientific Writing" on 2 June 2005 to staff of Department of Science and Mathematics, Kolej Universiti Teknikal Kebangsaan Malaysia at Le Paris Hotel, Port Dickson, Malaysia.
  - Invited to give lecture on "Synthesis and Characterization of Zeolites" to 25 researchers of Mineral Research Center, Department of Minerals and Geoscience Malaysia, Ipoh, 3-6 May 2005.
  - IRPA RM-8 Research Grant (2004-2007) RM 88,000.
  - Poster Competition Award (Didik Prasetyoko, Zainab Ramli, Hadi Nur and Salasiah Endud), International Conference on X-Ray and Related Techniques (ICXRI2004), 15-16 September 2004, Penang, Malaysia.
  - Guest Lecturer at COMBICAT research group, Universiti Kebangsaan Malaysia, 26-27 March 2004.
  - The best thesis of the year 2004 by Persatuan Sains Analisis Malaysia (ANALIS) on 26 August 2004 awarded to Mr. Amir Faizal Naidu Abdul Manan (under supervision of Dr. Hadi Nur and Prof. Dr. Halimatun Hamdan)
  - COE (Center of Excellent) Visiting Researcher, Catalysis Research Center, Hokkaido University, Japan, 2001.
  - JSPS (Japan Society for the Promotion of Science) Postdoctoral Fellowship Award, 1999.
  - Postdoctoral Fellowship Award, Universiti Teknologi Malaysia (UTM), 1998.
  - Universiti Teknologi Malaysia Fellowship Award, 1996.
  - Graduated with *cum laude* from Graduate Program in Materials Science and Engineering, Institut Teknologi Bandung (ITB), 1995.

**Research Projects** (outputs of the research projects are shown in list of publications)

- 2009 - present : Design of heterogeneous catalyst for liquid-gas reaction system using hollow polymer nanospheres.
- 2009 - present : Structure-catalytic activity relationship heterogeneous micellar catalysis.
- 2007 - present : Gold nanoparticles embedded on polymeric layer as novel label for biological diagnostics
- 2005 – present : Electrically Induced Contractile Electro-Active Polymer as Catalyst for Immiscible Liquid-Liquid Reaction.
- 2004 – present : Design and application of chiral solid catalysts synthesized by molecular imprinting method with polyaminoacid as chiral promoter for producing pharmaceutical products.
- 2003 – present : Solid state NMR in the study of materials.
- 1999 – present : Currently, my research is related to the development of a novel catalytic system, termed as "Phase-boundary Catalysis". A phase-boundary catalyst is a catalyst which is located at the liquid-liquid phase-boundary. It is already demonstrated that this system works for alkene epoxidation without stirring or the addition of a co-solvent to drive liquid-liquid phase transfer. The strategy to make the catalyst is different from those previously reported because we aim at placing the

---

bifunctional particles, containing both hydrophilic and hydrophobic regions, at the phase boundary in order to catalyze the reaction without requiring an emulsion containing the catalyst by stirring.

- 1999 : Direct synthesis of NaA zeolite from rice husk and carbonaceous rice husk ash.
- 1996 – 1999 : A large parts of my works relates to metal-substituted aluminophosphates (MeAPO) molecular sieves. These materials with desired and controllable properties, be adsorptive or catalytic have been successfully synthesized and modified for the specific purposes such as dehydration and dehydrogenation of alcohols reactions. In this research, I substitute Al atom in the framework structure with the divalent metal (Me) atoms (Me = Mn, Mg, Co and Zn) and silicon atom to generate catalytic sites. After the substitution was successful, this sites can act as active site to convert the reactant to product in a spesific way. It is clearly demonstrated that the conversion of cyclohexanol to cyclohexene (as a model reaction) involve the Me-O-P and Si-O-P sites in the framework of AIPO. This result also suggests that MeAPOs are potential catalysts for dehydrogenation of alcohols. It was demonstrated that MnAPSO-5 was the most active catalyst for dehydration and dehydrogenation reactions of alcohols. Based on our understanding on the fundamental factors in the catalytic activity of these materials, results of this research can open the innovation in applied catalysis and play role in industrial catalytic processes.

### **Research Grants**

- "Electric field-induced catalysis over electrically conducting surface", Fundamental Research Grant Scheme: Vot 78472 (RM 32,000) 2009-2011 (**Project leader**)
- "A novel design of heterogeneous catalyst for liquid-gas reaction system using hollow polymer nanospheres", Sciencefund research grant: Vot: 79384 (RM 218,000) 2009-2011 (**Project leader**)
- "Structure-catalytic activity relationship of hydrolyzed alkylsilane functionalized with amino acid as heterogeneous micellar catalysis", Fundamental Research Grant Scheme (RM 46,000) 2009 (**Project leader**)
- "Gold nanoparticles embedded on polymeric layer as novel label for biological diagnostics" eSciencefund research grant: Vot: 79126 (RM 184,000) 2007 (**Project leader**)
- "Mechanocatalysis with electrically induced contractile electro-active polymer", Fundamental Research Grant Scheme: Vot. 78070 (RM 61,000) (**Project Leader**).
- "Electrically Induced Contractile Electro-Active Polymer as Catalyst for Immiscible Liquid-Liquid Reaction", TWAS Grants in Basic Sciences - Trieste, Italy (USD 5,000). 2005: Vot 73323 (**Project Leader**).
- "Design of Chiral Solid Catalysts by Molecular Imprinting Method with Polyaminoacid as Chiral Promoter", IRPA EAR RM 8 research grant (RM 88,000), 2005-2007: Vot 74284) (**Project Leader**).
- "Nanoparticled Nanoporous Alumina", Fundamental Research Grant Scheme: Vot. 78076 (RM 77,000) 2007-2009 (**Researcher**).
- "Chiral Cavity Solid Catalyst for Acid-Base Catalyzed Enantioselective Reaction", SAGA research grant (RM 207,326) 2005-2007 (**Researcher**).
- "Microheterogeneous Catalytic System for Oxidation Reaction with Aqueous Hydrogen Peroxide", 2002-2007, IRPA Top-down RM 8 research grant (RM 650,000) (**Researcher**).
- "Development of a novel catalytic system for synthesis of useful organic materials" Grant-in-Aid for Encouragement of Young Scientists (No. 99302) from Ministry of Education, Science, Sports and Culture, Japan (**Researcher**).

- 
- "Metal-Substituted AlPO<sub>4</sub>-5 Molecular Sieves as Potential Catalysts for Conversion of Alcohols", IRPA EAR RM 7 research grant, 1995-1998 (**Researcher**).
  - "Direct Synthesis of NaA Zeolite From Rice Husk and Carbonaceous Rice Husk Ash", IRPA EAR RM 7 research grant, 1995-2000 (**Researcher**).

#### **Expert Evaluation Panel/Committee**

- FRGS Evaluation Panel, Universiti Teknologi Malaysia, 2007 – present
- Sciencefund Research Grant Evaluation Panel, Universiti Teknologi Malaysia, 2007 - present

#### **Publications**

- Book: **1**
- Review article: **1**
- Papers in peer-reviewed journals: **47**
- Papers and abstracts in conference and proceedings: **65**
- Thesis, articles in newspapers and others: **14**

#### *Book*

- H. Nur, "Heterogenous Chemocatalysis: Catalysis by Chemical Design", 2006. ISBN: 983-43098-2-1

#### *Review Article*

- H. Nur, "The design and synthesis of heterogeneous catalyst systems for synthesis of useful organic compounds", *Akta Kimia Indonesia*, 3 (2007) 1-10. [Keynote paper at National Seminar on Chemistry IX at Institut Teknologi Sepuluh Nopember (ITS), Surabaya, Indonesia, 24 July 2007]

#### *Refereed Journal Publications*

\*Corresponding author

- H. Nur\*, L. K. Wei, S. Endud, "Hydrolyzed octadecyltrichlorosilane functionalized with amino acid as heterogeneous enantioselective catalysts", *Reaction Kinetics and Catalysis Letters*, 98 (2009) 157-164.
- S. L. Lee\*, H. Nur, H. Hamdan, "Physical properties and bifunctional catalytic performance of phosphate-vanadium impregnated silica-titania aerogel", *Catalysis Letters*, 132 (2009) 28-33
- H. Nur\*, I. I. Misnon, H. Hamdan, "Alkylsilylated gold loaded magnesium oxide aerogel catalyst in the oxidation of styrene", *Catalysis Letters*, 130 (2009) 161-168.
- D. Prasetyoko\*, H. Fansuri, Z. Ramli, S. Endud, H. Nur, "Tungsten oxides - containing titanium silicalite for liquid phase epoxidation of 1-octene with aqueous hydrogen peroxide", *Catalysis Letters*, 128 (2009) 177-182.
- D. Prasetyoko\*, Z. Ramli, S. Endud, H. Nur, "Characterization and catalytic performance of niobic acid dispersed over titanium silicalite", *Advances in Materials Science and Engineering*, vol. 2008, Article ID 345895, 12 pages, 2008. doi:10.1155/2008/345895.
- D. Prasetyoko\*, Z. Ramli, S. Endud, H. Nur, "Characterization and catalytic performance of niobic acid dispersed over titanium silicalite", *Advances in Materials Science and Engineering*, vol. 2008, Article ID 345895, 12 pages, 2008. doi:10.1155/2008/345895.

- S. Chandren, Z. Ramli\*, H. Nur, "Reactivity and reusability of mesoporous alumina nanoparticles modified with sulfuric acid and niobic acid in the alkylation of resorcinol", *Journal of Fundamental Sciences*, 4 (2008) 321-327.
- S. M. Nasir, H. Nur\*, "Gold nanoparticles embedded on the surface of polyvinyl alcohol layer", *Journal of Fundamental Sciences*, 4 (2008) 245-252.
- H. Nur\*, I. I. Misnon, L. K. Wei, "Stannic oxide-titanium dioxide coupled semiconductor photocatalyst loaded with polyaniline for enhanced photocatalytic oxidation of 1-octene", *International Journal of Photoenergy*, vol. 2007, Article ID 98548, 6 pages, 2007. doi:10.1155/2007/98548
- H. Nur\*, F. Hayati, H. Hamdan, "On the location of different titanium sites in Ti-OMS-2 and their catalytic role in oxidation of styrene", *Catalysis Communications*, 8 (2007) 2007-2011.
- E. P. Ng\*, H. Nur\*, K. L. Wong, M. N. M. Muhid, H. Hamdan, "Generation of Brönsted acidity in AIMCM-41 by sulphation for enhanced liquid phase *tert*-butylation of phenol", *Applied Catalysis A: General*, 323 (2007) 58-65.
- N. Y. Hau\*, I. I. Misnon, H. Nur, M. N. M. Muhid, H. Hamdan, "Biphasic epoxidation of 1-octene with H<sub>2</sub>O<sub>2</sub> catalyzed by amphiphilic fluorinated Ti-loaded zirconia", *Journal of Fluorine Chemistry*, 128 (2007) 12-16.
- H. Nur\*, N. A. Rahman, S. Endud, L. K. Wei, "Thermal stability of conductivity of composite comprising polyaniline and MCM-41", *Malaysian Journal of Polymer*, 2(2) (2007) 12-21.
- M. S. Umi Kalsom\*, H. Nur, A. A. Norlea, S. Ngaspan, "Characterization of humic acid from humification of oil palm empty fruit bunch fibre using *Trichoderma viride*", *Journal of Tropical Agriculture and Food Science*, 34 (2006) 165-172.
- H. Nur\*, "Modification of titanium surface species of titania by attachment of silica nanoparticles", *Materials Science and Engineering B: Solid State Materials for Advanced Technology*, 133 (2006) 49-54.
- H. Nur\*, N. Y. Hau, I. I. Misnon, H. Hamdan, M. N. M. Muhid, "Hydrophobic fluorinated TiO<sub>2</sub>-ZrO<sub>2</sub> as catalyst in epoxidation of 1-octene with aqueous hydrogen peroxide", *Materials Letters*, 60 (2006) 2274-2277.
- N. E. Poh, H. Nur, M. N. M. Muhid, H. Hamdan\*, "Sulfated AIMCM-41: Mesoporous Solid Bronsted Acid Catalysts for Dibenzoylation of Biphenyl", *Catalysis Today*, 114 (2006) 257-262.
- H. Nur\*, H. Hamid, S. Endud, H. Hamdan, Z. Ramli, "Iron-Porphyrin Encapsulated in Poly(methacrylic) and Mesoporous Al-MCM-41 as Catalysts in the Oxidation of Benzene to Phenol", *Materials Chemistry and Physics*, 96 (2006) 337-342.
- C. G. Lau, H. Nur\* and S. Endud "Bimodal pore size mesoporous MCM-48 materials prepared by post-synthesis alumination", *Journal of Physical Science*, 17 (2006) 65-75.
- S. Triwahyono\*, A. A. Jalil, H. Nur, H. Hamdan, M. Kobayashi, "Development of membrane reactor for epoxidation of propylene to propylene oxide in a single step", *Journal - The Institution of Engineers, Malaysia*, 67 (2006) 7-12.
- F. Hayati, H. Nur, H. Hamdan, "Titanium Doped Octahedral Manganese Oxide Hybrid Catalyst in the Oxidation of Cyclohexene", *Buletin Kimia*, 21 (2005) 49-54.
- E. Rismana, S. Endud, H. Nur, "Synthesis of CdS nanoparticles in HDTMAB/2-Propanol/Water/n-Decane Miniemulsion system", *Buletin Kimia*, 21 (2005) 55-65.
- W. K. Man, Z. Ramli\* and H. Nur, "Effect of Loaded Alkali Metals on The Structural, Basicity and Catalytic Activity of Zeolite Beta", *Jurnal Teknologi*, 42 (2005) 43-55.
- D. Prasetyoko, Z. Ramli, S. Endud and H. Nur\*, "TS-1 Loaded with Sulfated Zirconia as Bifunctional Oxidative and Acidic Catalyst for Transformation of 1-Octene to 1,2-Octanediol", *Journal of Molecular Catalysis A: Chemical*, 241 (2005) 118-125.
- D. Prasetyoko\*, Z. Ramli, S. Endud and H. Nur, "Niobic acid dispersed on the surface of TS-1: Acidity study", *Akta Kimia Indonesia*, 1 (2005) 11-16.

- D. Prasetyoko, Z. Ramli, S. Endud and H. Nur\*, "Enhancement of catalytic activity of Titanosilicalite-1 - sulfated zirconia combination towards epoxidation of 1-octene with aqueous hydrogen peroxide", *Reaction Kinetics and Catalysis Letters*, 86 (2005) 83-89.
- D. Prasetyoko\*, Z. Ramli, S. Endud and H. Nur, "Preparation and characterization of bifunctional oxidative and acidic catalysts Nb<sub>2</sub>O<sub>5</sub>/TS-1 for synthesis of diols", *Materials Chemistry and Physics*, 93 (2005) 443-449.
- D. Prasetyoko, Z. Ramli\*, S. Endud and H. Nur, "Structural and superacidity study of bifunctional catalyst, sulfated-titanium/TS-1", *Malaysian Journal of Chemistry*, 7 (2005) 11-18.
- H. Hamdan\*, V. Navijanti, H. Nur, M. N. M. Muhid., "Fe(III)-salen encapsulated Al-MCM-41 as a catalyst in the polymerisation of bisphenol-A", *Solid State Sciences*, 7 (2005) 239-244.
- H. Nur\*, A. F. N. A. Manan, L. K. Wei, M. N. M. Muhid and H. Hamdan. "Simultaneous adsorption of a mixture of paraquat and dye by NaY zeolite covered with alkylsilane", *Journal of Hazardous Materials*, 117, 2005, 35-40
- H. Nur\*, D. Prasetyoko, Z. Ramli and S. Endud, "Sulfation: a simple method to enhance the catalytic activity of TS-1 in epoxidation of 1-octene with aqueous hydrogen peroxide", *Catalysis Communications*, 5, 2004, 725-728.
- H. Nur\*, N. Y. Hau, M. N. M. Muhid, H. Hamdan, "Surface structure of alkylsilylated HZSM-5 as phase-boundary catalyst", *Physics Journal of the IPS.*, A7, 2004, 0218.
- H. Nur\*, S. Ikeda and B. Ohtani, "Phase-boundary catalysts for acid-catalyzed reactions: the role of bimodal amphiphilic structure and location of active sites", *Journal of Brazilian Chemical Society*, 15, 2004, 719-724.
- H. Nur\*, S. Ikeda and B. Ohtani, "Amphiphilic NaY zeolite particles loaded with niobic acid: materials with applications for catalysis in immiscible liquid-liquid system", *Reaction Kinetics and Catalysis Letters*, 82, 2004, 255-261.
- W. K. Man, H. Nur\*, A. R. Yacob and Z. Ramli, "The Basicity and Acidity of Beta Zeolites after Ion-Exchange with Alkali Metal Cations: a Physicochemical Characterization", *Physics Journal of the IPS.*, A7, 2004, 0211.
- R. R. Mukti, H. Nur, S. Endud and H. Hamdan\*, "Selective dibenzoylation of biphenyl to 4,4-dibenzoylbiphenyl over H-Al-MCM-41", *Studies in Surface Science and Catalysis*, Part A-C, 2004, 2767-2772.
- H. Nur\*, C. G. Lau, S. Endud and H. Hamdan, "Quantitative measurement of a mixture of hexagonal MCM-41 and cubic MCM-48 mesophases by <sup>13</sup>C CP/MAS NMR", *Materials Letters*, 58 (2004) 1971-1974.
- S. Ikeda, H. Nur, P. Wu, T. Tatsumi and B. Ohtani\*, "Effect of titanium active site location on activity of phase boundary catalyst particle for alkene epoxidation with aqueous hydrogen peroxide", *Studies in Surface Science and Catalysis*, 145, 2003, 251-254.
- H. Nur\* and H. Hamdan, "Structural distortion in MeAPO-5 molecular sieves: a <sup>31</sup>P MAS NMR study", *Physics Journal of the IPS.*, A5, 2003, 0117.
- H. Nur\*, "Perspective on higher education and research in Indonesia, Malaysia and Japan" (in Indonesian), *Jurnal Forum Pendidikan*, 28, 2003, 363-371.
- S. Ikeda, H. Nur, T. Sawadaishi, K. Ijiri, M. Shimomura and B. Ohtani\*, "Direct observation of bimodal amphiphilic surface structures of zeolite particles for a novel liquid-liquid phase-boundary catalysis", *Langmuir*, 17(29), 2001, 7976-7979.
- H. Nur, S. Ikeda and B. Ohtani\*, "Phase-boundary catalysis of alkene epoxidation with aqueous hydrogen peroxide using amphiphilic zeolite particles loaded with titanium oxide", *Journal of Catalysis*, 204, 2001, 402-408.
- H. Nur\* and H. Hamdan, "The ionic size of metal atoms in correlation with acidity by the conversion of cyclohexanol over MeAPO-5", *Materials Research Bulletin*, 36, 2001, 315-322.

- H. Nur\*, "Direct Synthesis of NaA Zeolite from Rice Husk and Carbonaceous Rice Husk Ash", *Indonesian Journal of Agriculture Sciences*, 1, 2001, 40-45.
- H. Nur, S. Ikeda and B. Ohtani\*, "Phase-boundary catalysis: a new approach in alkene epoxidation with hydrogen peroxide by zeolite loaded with alkylsilane-covered titanium oxide", *Chemical Communications*, 2000, 2235-2235.
- H. Nur\* and H. Hamdan, "Dehydration and dehydrogenation of cyclohexanol over  $\text{AlPO}_4\text{-5}$  based molecular sieves", *Reaction Kinetics and Catalysis Letters*, 66, 1999, 33-38.
- H. Nur\* and H. Hamdan, "Deactivation modes and reactions over HZSM-5,  $\text{AlPO}_4\text{-5}$  and MnAPSO-5 in conversion of cyclohexanol", *Buletin Kimia*, 13(2), 1998, 31-38.
- S. Endud, H. Nur and H. Hamdan\*, "Probing the active sites of aluminated mesoporous molecular sieve MCM-41 by secondary synthesis in the conversion of cyclohexanol", *Studies in Surface Science and Catalysis*, 117, 1998, 453-459.

### **Conference and Proceedings**

- S. L. Lee, H. Nur, H. Hamdan, "Physical Properties and Catalytic Behaviour of Sulfate and Vanadium Loaded Silica-Titania Aerogel", Second International Conference and Workshops on Basic and Applied Sciences (2nd ICOWOBAS), and Regional Annual Fundamental Science Seminar 2009 (RAFSS 2009), 2-4 June 2009, Johor Bahru, Malaysia, p. 43
- A. B. Hoo, H. Nur, "Electric-Field-Induced Oxidation of Benzhydrol to Benzophenone over Electrically Conducting Surface containing Titanium Dioxide", Second International Conference and Workshops on Basic and Applied Sciences (2nd ICOWOBAS), and Regional Annual Fundamental Science Seminar 2009 (RAFSS 2009), 2-4 June 2009, Johor Bahru, Malaysia, p. 71
- S. Chandren, Z. Ramli, H. Nur, "Modification of Mesoporous Alumina Nanoparticles with Brönsted Acid Precursors", Second International Conference and Workshops on Basic and Applied Sciences (2nd ICOWOBAS), and Regional Annual Fundamental Science Seminar 2009 (RAFSS 2009), 2-4 June 2009, Johor Bahru, Malaysia, p. 71
- H. Nur, L. K. Wei, I. D. Samsuri, N. Zamahsari, M. M. Salleh, W. F. W. Ahmad, "Pollen from *fraxinus pennsylvanica* as microreactor for in-situ synthesis of aluminium oxide and titanium oxide nanoparticles", Book of abstract of Regional Annual Fundamental Science Seminar 2008, 27-29 May 2008, Johor Bahru, Malaysia. p. 70.
- A. B. Hoo, R. A. A. Latif, H. Nur, "The effect of electric field and ultraviolet irradiation in the removal of metylene blue by polypyrrole containing titanium oxide", Book of abstract of Regional Annual Fundamental Science Seminar 2008, 27-29 May 2008, Johor Bahru, Malaysia. p. 69.
- H. Nur, S. M. Nasir, "Gold nanoparticles embedded on the surface of polymeric layer as a biological sensor", Book of abstract of Regional Annual Fundamental Science Seminar 2008, 27-29 May 2008, Johor Bahru, Malaysia. p. 16.
- S. Chandren, Z. Ramli, H. Nur, "Reactivity and reusability of mesoporous alumina nanoparticles modified with sulphuric acid and niobic acid in the alkylation of resorcinol", Book of abstract of Regional Annual Fundamental Science Seminar 2008, 27-29 May 2008, Johor Bahru, Malaysia. p. 18.
- H. Nur, E. Rismana, S. Endud, "Nanosize effect of cadmium sulfide attached on poly(methacrylic acid-ethylene glycol dimethacrylate) on Dielectrical Property", Book of abstract of 2008 International Conference on Nanoscience and Nanotechnology (ICONN 2008), 25-29 February 2008 - Melbourne, Victoria, Australia. (no page number, 2 pages - in CD ROM).
- H. Nur, "Effect of attachment of silica nanoparticles on coordination of titanium surfaces species of titania", in M. Niinomi, S. Akiyama, M. Hagiwara, M. Ikeda, K. Maruyama (Editors), Ti-2007, Science and Technology, Proceedings of The 11th

- 
- World Conference on Titanium (JIMIC-5), 3-7 June 2007, Kyoto, Japan. pp. 1671-1674.
- H. Nur, I. I. Misnon, L. K. Wei, "The effect of attachment of polyaniline on stannic oxide-titanium dioxide coupled semiconductor in photocatalytic oxidation of 1-octene", Book of abstract of Regional Annual Fundamental Science Seminar 2007, 28-29 May 2007, Johor Bahru, Malaysia. p. 49-50.
  - N. A. Rahman, H. Nur, S. Endud, L. K. Wei, T. Hino, N. Kuramoto, "Composite Comprising Sulfonic Acid-Functionalized MCM-41 and Polyaniline and Its Thermal Stability of Conductivity", International Symposium on Zeolites and Microporous Crystals, Yanago, Tottori, Japan, 30 July - 2 August 2006. P2044.
  - E. Rismana, S. Endud, H. Nur, "Synthesis of different-sized cadmium sulfide nanoparticles inside polymer and mesoporous AIMCM-41 matrices by direct polymerization miniemulsion and ion exchange techniques", Book of abstract of Annual Fundamental Science Seminar 2006, 6-7 June 2006, Johor Bahru, Malaysia. p. 60.
  - H. Nur, C. Y. Hean, "Transformation of local environment of titanium surface species of titania by attachment of silica nanoparticles", Book of abstract of Annual Fundamental Science Seminar 2006, 6-7 June 2006, Johor Bahru, Malaysia. p. 61.
  - Y. K. Fong, M. N. M. Muhid, H. Nur, "Hydrophobic sulfonic acid-NaY zeolite as catalyst in transesterification of palm oil", Book of abstract of Annual Fundamental Science Seminar 2006, 6-7 June 2006, Johor Bahru, Malaysia. p. 62.
  - G. L. Kee, H. Hamdan, H. Nur, "Amphiphilic zeolite-alkylsulfonic acid nanocomposite as proton conducting membrane", Book of abstract of Annual Fundamental Science Seminar 2006, 6-7 June 2006, Johor Bahru, Malaysia. p. 63.
  - H. Nur, N. Y. Hau, I. I. Misnon, H. Hamdan, M. N. M. Muhid, "Enhancement of catalytic activity of  $\text{TiO}_2\text{-ZrO}_2$  by fluorination and alkylsilylation in epoxidation of 1-octene with aqueous hydrogen peroxide", Book of abstract of Annual Fundamental Science Seminar 2005, 4-1 July 2005, Johor Bahru, Malaysia. p. 61.
  - F. Hayati, H. Hamdan, H. Nur, "Synergistic effect of titanium and OMS-2 as Ti-OMS-2 hybrid catalyst in oxidation of cyclohexene", Book abstract of Annual Fundamental Science Seminar 2005, 4-1 July 2005, Johor Bahru, Malaysia. p. 67.
  - N. A. Rahman, H. Nur, S. Endud, L. K. Wei, T. Hino, N. Kuramoto, "Remarkable thermal stability of conductivity of polyaniline/MCM-41 composite", Book of abstract of Annual Fundamental Science Seminar 2005, 4-1 July 2005, Johor Bahru, Malaysia. p. 68.
  - E. Rismana, H. Nur, S. Endud, "Synthesis of CdS nanoparticles in HDTMAB/propanol/water/n-decane miniemulsion system", Book of abstract of Annual Fundamental Science Seminar 2005, 4-1 July 2005, Johor Bahru, Malaysia. p. 69.
  - H. Nur, A. F. N. A. Manan, L. K. Wei, M. N. M. Muhid and H. Hamdan, "The Use of NaY Zeolite Covered with Alkylsilane for Simultaneous Adsorption of a Mixture of Paraquat and Dye", Proceedings: 3<sup>rd</sup> Annual Seminar on Sustainability Science and Management, 4-5 May 2004, Kolej Universiti Sains dan Teknologi Malaysia, N. M. Tahir *et al.* (Eds.), 33-37.
  - S. Triwahyono, M. Faizal, A. A. Jalil, H. Nur, M. N. M. Muhid, M. Shamsudin, H. Hamdan, "Influence of the sulfate ion on the structural properties of  $\text{Pt/SO}_4^{2-}\text{-ZrO}_2$ ", Prosiding SKAM-17, 24 - 26 Ogos 2004, Kuantan, 60-62.
  - S. Triwahyono, H. Nur, A. A. Jalil, M. N. M. Muhid, M. Shamsudin, H. Hamdan, "Study of hydrogen adsorption on  $\text{WO}_3\text{-ZrO}_2$  hybrid catalyst", Prosiding SKAM-17, 24 - 26 Ogos 2004, Kuantan, 598-600.
  - S. Triwahyono, A. Zalizawati, M. Faizal, A. A. Jalil, H. Nur, M. N. M. Muhid, M. Shmasudin, H. Hamdan, "FTIR and TPD studies of acid properties of  $\text{Pt/SO}_4^{2+}\text{-ZrO}_2$ ", Prosiding SKAM-17, 24 - 26 Ogos 2004, Kuantan, 605-608.
  - Z. Ramli, D. Prasetyoko, S. Endud and H. Nur, "Monolayer coverage and acidity study of bifunctional oxidative acidic catalyst by infrared spectroscopy: zirconia sulfate loaded titanium silicalite", Prosiding SKAM-17, 24 - 26 Ogos 2004, Kuantan, 662-665.

- H. Nur, D. Prasetyoko, Z. Ramli and S. Endud, "A simple method to enhance the catalytic activity of TS-1 catalyst in epoxidation of 1-octene with aqueous peroxide by sulfation", Proceedings of the 3<sup>rd</sup> Hokkaido Indonesian Student Association Scientific Meeting (HISAS 3), 2004, Sapporo, Japan, 130-133.
- H. Nur, N. A. Rahman and S. Endud, "Probing the Interfacial Interaction of Polymeric PEO/Li-Al-MCM-41 Nanocomposite: A <sup>27</sup>Al, <sup>13</sup>C and <sup>7</sup>Li Solid State MAS NMR Study", Proceedings of the 2<sup>nd</sup> Annual Fundamental Science Seminar, AFSS 2004, S. Sakrani *et al.* (Eds.), 2004, 119-123.
- A. F. N. A. Manan, H. Nur and H. Hamdan, "Simultaneous Adsorption of a Mixture of Paraquat and Dye by NaY Zeolite Covered with Alkylsilane", Proceedings of the 2<sup>nd</sup> Annual Fundamental Science Seminar, AFSS 2004, S. Sakrani *et al.* (Eds.), 2004, 133-137.
- H. Hamid, S. Endud, H. Nur, Z. Ramli, "Comparative Study of Iron Porphyrin Supported on Mesoporous Al-MCM-41 and Poly(Methacrylic Acid) (PMMA) : Characterization and Their Catalytic Activities", Proceedings of the 2<sup>nd</sup> Annual Fundamental Science Seminar, AFSS 2004, S. Sakrani *et al.* (Eds.), 189-197.
- D. Prasetyoko, Z. Ramli, H. Nur and S. Endud, "A New Approach to Probe the Dispersion Capacity of Tungsten Oxide on the Surface of Titanium Silicalite by Infrared Spectroscopy", Proceedings of the 2<sup>nd</sup> Annual Fundamental Science Seminar, AFSS 2004, S. Sakrani *et al.* (Eds.), 207-215.
- S. Triwahyono, H. Nur, A. A. Jalil, M. N. M. Muhid, M. Shamsuddin, H. Hamdan and H. Hattori, "Hydrogen Adsorption on Pt/SO<sub>4</sub><sup>2-</sup> - ZrO<sub>2</sub> Solid Super Acid Catalyst", Proceedings of the 2<sup>nd</sup> Annual Fundamental Science Seminar, AFSS 2004, S. Sakrani *et al.* (Eds.), 2004, 235-238.
- S. Triwahyono, H. Nur, A. A. Jalil, M. N. M. Muhid, M. Shamsudin, H. Hamdan, H. Hattori, "Molecular Hydrogen Originated Protonic Acid Site on Pt/WO<sub>3</sub> ZrO<sub>2</sub>", Proceedings of the 2<sup>nd</sup> Annual Fundamental Science Seminar, AFSS 2004, S. Sakrani *et al.* (Eds.), 2004, 235-238.
- L. C. Guan, S. Endud and H. Nur, "Highly Effective Cubic Aluminated Mesoporous Catalyst in Friedel-Craft Acylation", Proceedings of the 2<sup>nd</sup> Annual Fundamental Science Seminar, AFSS 2004, S. Sakrani *et al.* (Eds.), 176-182.
- F. Hayati, H. Nur and H. Hamdan, "Synthesis and Characterization of Octahedral Molecular Sieves (OMS-2)", Book of abstract of Annual Fundamental Science Seminar 2004, 14-15 June 2004, Johor Bahru, Malaysia. p. 73.
- H. Nur, "A novel design of heterogeneous catalyst for liquid-gas reaction system with Mars-van Krevelen type mechanism", Proceeding of Annual Fundamental Science Seminar 2003 (AFSS 2003), 20-21 May 2003, Puteri Pan Pacific Hotel, Johor Bahru, Malaysia. p. 92-95.
- R. R. Mukti, H. Nur, K. W. Lim, S. Endud, H. Hamdan and S. Endud, "Reconstruction of MCM-41 structure: The effect of NaOH and H<sub>2</sub>O addition", Proceeding of Annual Fundamental Science Seminar 2003 (AFSS 2003), 20-21 May 2003, Puteri Pan Pacific Hotel, Johor Bahru, Malaysia. p. 208-214.
- R. Yahaya, A. Kassim, H. Hamdan, H. Nur, S. Endud, L. K. Wei, Norazizah, E. Mahmud, "Microstructure study of nanomaterials of MCM-41 as a host of polymerization of pyrrole" *J. Sol. State Sci. Tech. Lett.*, Vol. 10, No. 2 (suppl.) 2003, 48.
- H. Nur, S. Ikeda and B. Ohtani, "The role of bimodal amphiphilic structure and effective location of active sites of phase-boundary catalyst for epoxidation of 1-octene", Book of abstract of International Conference on Materials for Advanced Technologies (ICMAT 2003), 7-12 December 2003, Singapore. p. 115.
- H. Nur, "A novel heterogeneous catalyst design for liquid-liquid and liquid-gas reaction systems", Proceeding of International Conference on Advancement in Science and Technology (ICAST 2003), 5-7 August 2003, Nikko Hotel, Kuala Lumpur, Malaysia. p. 108-110 .

- R. R. Mukti, H. Nur, H. Hamdan, S. Endud, "Selective benzylation of biphenyl to disubstituted 4,4'-dibenzoylbiphenyl over mesoporous molecular sieve H-Al-MCM-41", Proceeding of International Conference on Advancement in Science and Technology (ICAST 2003), 5-7 August 2003, Nikko Hotel, Kuala Lumpur, Malaysia. p. 114-116.
- H. Nur, N. Y. Hau, M. N. M, Muhid and H. Hamdan, "Preparation of solid superacid catalysts for reaction at liquid-liquid interphase", Book of abstracts of Simposium Kimia Analisis Malaysia ke-16 (SKAM 16), 9-11 September 2003, Holiday Inn Resort, Damai Lagoon Kuching, Sarawak. p. 37.
- H. Nur, "Education and research at University in Indonesia, Malaysia and Japan: Why Indonesian Universities not the best?", (in Indonesian), Proceedings of the 2nd Hokkaido Indonesian Student Association Scientific Meeting (HISAS I), 2003, Sapporo, Japan. p. 105-112.
- S. Ikeda, K. Ikeue, Y. Kowata, H. Nur and B. Ohtani "Phase-Boundary Catalysis and Photocatalysis: Novel Green Chemistry Processes for Liquid-Liquid Two Phase Reactions", Book of abstract of The Third International Workshop on Oxide Surfaces (IWOX3), Symposium of Division of Colloid and Surface Chemistry, The Chemical Society of Japan and CRC International Conference, 27-31 January, 2003, Sapporo, Japan.
- H. Nur, "Phase-boundary catalysis - A novel green chemistry concept for catalytic processes", Prosiding Upaya membina kemandirian bangsa melalui sains dan teknologi kimia material: Seminar sehari 70 tahun Noer Mandsjoeriah Surdia, 11 January 2003, Bandung, Indonesia. p. 2-19.
- N. A. Rahman, S. Endud, H. Hamdan and H. Nur, "A simple method to synthesize intercalated nanocomposite of polyethylene oxide/Li-exchanged Al-MCM-41 as conducting material", Book of abstracts of Simposium Kimia Analisis ke 15 (SKAM 15), 10-12 September 2002, Pulau Pinang, Malaysia. p. 62.
- H. Nur, S. Ikeda and B. Ohtani, "Phase-boundary catalysis for acid catalyzed hydration of epoxide to diol", Proceedings of the Fifth UKM-ITB Joint seminar on Chemistry, 16-17 July 2002, Melaka, Malaysia. p. 746.
- Y. Kowata, S. Ikeda, H. Nur and B. Ohtani, "Preparation of asymmetric titanium(IV) oxide particles assembled in a liquid-liquid phase-boundary and their photocatalytic activity" (in Japanese), Book of abstracts of the Annual Meeting of Catalysis Society of Japan, 26-29 March 2002, Tokyo, Japan. p. 584.
- B. Ohtani, S. Ikeda, H. Nur and Y. Kowata, "Liquid-Liquid Phase Boundary Catalysis and Photocatalysis: Novel Green Chemistry Processes", Book of abstracts of The 5th SANKEN (ISIR) International Symposium "Frontier Material Science towards Energy Conversion and Eco Design", 14-15 March 2002, Osaka, Japan. P2.32.
- H. Nur, S. Ikeda and B. Ohtani, "Bimodal amphiphilic zeolite particles: a novel catalyst for reaction at liquid-liquid phase boundary", Book of abstracts of the 12th CRC International Symposium on Advanced Chemical Conversion of Methane, 18-20 November 2001, Sapporo, Japan. p. 76-77.
- H. Nur and H. Hamdan, "The role of the framework and extraframework manganese and silicon of MnAPSO-5 in the conversion of cyclohexanol", Proceedings of the 1st Hokkaido Indonesian Student Association Scientific Meeting (HISAS I), 2001, Sapporo, Japan, 58-66.
- H. Nur, "Scientific ethics: An important aspect in research and higher education in Indonesia", (in Indonesian), Proceedings of the 1st Hokkaido Indonesian Student Association Scientific Meeting (HISAS I), 2001, Sapporo, Japan, 52-57.
- S. Ikeda, H. Nur, and B. Ohtani, "Preparation of partly hydrophobic zeolite particles for liquid-liquid phase-boundary reaction" (in Japanese), Book of abstracts of 54th Meeting of Colloid and Surface Chemistry Division, Chemical Society of Japan, 16-18 September 2001, Tokyo, Japan. p. 136.
- S. Ikeda, H. Nur, T. Sawadaishi, K. Ijiro, M. Shimomura and B. Ohtani, "Structure of liquid-liquid phase-boundary catalyst" (in Japanese), Book of abstracts of Fall Meeting of Catalysis Society of Japan, 9-12 October 2001, Japan. p. 263.

- S. Ikeda, H. Nur, and B. Ohtani, "Phase-boundary catalysis using partly hydrophobic zeolite particles" (in Japanese), Book of abstracts of Fall Meeting of Chemical Society of Japan, 16-20-23 September 2001, Chiba, Japan. 4BC-10.
- S. Ikeda, Y. Kowata, H. Nur, and B. Ohtani, "Phase-boundary photocatalysis by titanium oxide particles partially modified with alkylsilyl groups" (in Japanese), Book of abstracts of Annual Meeting on Photochemistry 2001 and International Symposium on the 21st Century Photochemistry, 10-13 September 2001, Kanazawa, Japan. p. 375.
- S. Ikeda, H. Nur, and B. Ohtani, "Liquid phase oxidation by using phase-boundary catalysts" (in Japanese), *Catalyst and Catalysis*, 43, 2001, 143-145.
- S. Ikeda, H. Nur and B. Ohtani, "Liquid-liquid phase-boundary catalysis by amphiphilic zeolite nanoparticles", Book of abstracts of Symposium of Nano-scale Catalysis and Electrochemistry, 19-21 March 2001, Sapporo, Japan. p. 72.
- S. Ikeda, H. Nur and B. Ohtani, "Phase-boundary catalysis: a novel approach for alkene epoxidation by amphiphilic zeolite catalyst", Book of abstracts of International Symposium on Catalysis and Fine Chemicals 2001 (C&FC2001), 12-14 March 2001, Tokyo, Japan. p. 41.
- H. Nur, S. Ikeda and B. Ohtani, "Epoxidation of alkene at a boundary of aqueous hydrogen peroxide and organic phases by amphiphilic titanium-loaded zeolite catalyst", Book of abstracts of Winter Meeting of Hokkaido Branch of The Japan Society for Analytical Chemistry, 1-2 February 2001, Sapporo, Japan. p. 90.
- H. Hamdan, W. Y. Hing, H. Nur, "Perhubungan antara Sifat Fizik dengan Struktur Simen Abu Sekam Padi (RHA) dan Simen Abu Terbang Kelapa Sawit (POFA) oleh  $^{29}\text{Si}$  MAS NMR", Book of abstracts of Seminar Kimia Bersama UKM-ITB ke IV, Yogyakarta, Indonesia, Februari 2000.
- B. Ohtani, S. Ikeda, H. Nur and H. Semba, "Heterogeneous reaction method and phase-boundary catalysis", (in Japanese), Japanese patent application no. 2000-254229.
- S. Ikeda, H. Nur and B. Ohtani, "Phase boundary catalysis: A novel approach for alkene epoxidation by zeolite partly modified with alkylsilane with hydrogen peroxide", Book of abstracts of Symposium on Nano-structured Materials and Advanced Functions: Post Symposium of International Conference on Colloid and Surface Science, 10-11 November 2000, Sapporo, Japan. p. 47.
- H. Nur, S. Ikeda and B. Ohtani, "Zeolite catalyst loaded with alkylsilane-covered titanium oxide as a model catalyst of triphase System", Book of abstracts of Fall Meeting of Catalysis Society of Japan, 19-22 September 2000, Tottori, Japan. p. 306.
- H. Hamdan, W. Y. Hing, H. Nur, "Perhubungan antara sifat fizik struktur simen abu sekan padi (RHA) dan simen abu terbang kelapa sawit (POFA) oleh  $^{29}\text{Si}$  MAS NMR", Seminar Kimia Bersama UKM-ITB ke IV, Yogyakarta, Indonesia, 2000.
- H. Nur and H. Hamdan, "The removal of template from MeAPO-5 and MeAPSO-5 by calcination and treatment with methanolic hydrochloric acid: structural effect and mechanism", in Proceedings of Regional Symposium on Chemical Engineering 1997, Malaysia, 613-619.
- H. Nur and H. Hamdan, "Properties of cobalt substituted aluminophosphate and silicoaluminophosphate molecular sieves number five", Book of abstracts the Seminar Kimia Bersama UKM-ITB Ketiga, Universiti Kebangsaan Malaysia, 1997.

#### *Thesis*

- H. Nur, "Tailoring of Novel Metal-Substituted  $\text{AlPO}_4\text{-5}$  Molecular Sieves as Potential Catalysts for Conversion of Alcohols", Ph.D. Thesis, Universiti Teknologi Malaysia, 1998.
- H. Nur, "Synthesis of Hydroxylapatite Bioceramics by means of Precipitation and its Characterization", Master of Engineering Thesis (*in Indonesian*), Institut Teknologi Bandung, 1995.

- H. Nur, "Comparative Study on the Determination of Selenium in Human Blood by Neutron Activation Analysis and Atomic Absorption Spectrometry", First Degree Thesis (*in Indonesian*), Institut Teknologi Bandung, 1992.

#### *Other Publications*

- H. Nur, "The way of Japan to achieve the excellent in education and research", (*in Indonesian*) *Waspada Newspaper*, May 8, 2004.
- H. Nur, "Scientific ethics in research and higher education in Indonesia", (*in Indonesian*) *Waspada Newspaper*, May 14, 2004.
- H. Hamdan, Z. Ramli, S. Endud, M. N. M. Muhid and H. Nur, "Synthesis of zeolites and aluminophosphate molecular sieves for the development of catalyst and materials", in *Discovery Research and Innovations in UTM*, 1999, 214-215.
- H. Hamdan, Z. Ramli, S. Endud, M. N. M. Muhid and H. Nur, "Synthesis of zeolites from rice husk", in *Discovery Research and Innovations in UTM*, 1999, 216-217.
- H. Nur, "Framework for Islamic science", (*in Indonesian*), 2004, *unpublished*.
- H. Nur, "Iran: The most advanced Islamic country in science", (*in Indonesian*), 2005, *unpublished*.
- H. Nur, "From the editor", *Paksi Jurnal*, 8 (2005) 1.
- H. Nur, "Integrating Science, Technology and Religion – A Universiti Teknologi Malaysia Perspective", 2007, *unpublished*.
- H. Nur, "Heterogenous Chemocatalysis: Catalysis by Chemical Design – A Personal Experience", 2008, *unpublished*.
- H. Nur, Mohd Ismail Abd. Aziz, Mohd Azraai Kassim, Mohd Nor Musa, Mohd Marsin Sanagi, "International research collaboration: Issues and Challenge", paper presented at University Presidents Forum, Universiti Teknologi Malaysia, 26-27 March 2009.
- H. Nur, Mohd Ismail Abd. Aziz, Mohd Azraai Kassim, Ahmad Kamal Idris, Mohd Saleh Abu, Mohd Zaki Kamsah, "The information technology strategic alignment model: An approach for international academic collaboration", paper presented at University Presidents Forum, Universiti Teknologi Malaysia, 26-27 March 2009.

#### **Editorial**

- International Editorial Board for *Bulletin of Chemical Reaction Engineering and Catalysis (BCREC)*: 2006 - present
- Editor of *Journal of Fundamental Sciences*: 2005-present
- Editor of Proceedings of the 1st Hokkaido Indonesian Student Association Scientific Meeting (HISAS I), 4 November 2001, Sapporo, Japan 2001.
- Editor of Proceedings of the 6<sup>th</sup> Regional Annual Fundamental Science Seminar 2006, Ibnu Sina Institute for Fundamental Science Studies, Universiti Teknologi Malaysia.
- Editor of Proceedings of the 5<sup>th</sup> Regional Annual Fundamental Science Seminar 2006, Ibnu Sina Institute for Fundamental Science Studies, Universiti Teknologi Malaysia.
- Editor of Proceedings of the 4<sup>th</sup> Annual Fundamental Science Seminar 2006, Ibnu Sina Institute for Fundamental Science Studies, Universiti Teknologi Malaysia.
- Editor of Proceedings of the 3<sup>rd</sup> Annual Fundamental Science Seminar 2005, Ibnu Sina Institute for Fundamental Science Studies, Universiti Teknologi Malaysia.
- Editor of Proceedings of the 2<sup>nd</sup> Annual Fundamental Science Seminar 2004, Ibnu Sina Institute for Fundamental Science Studies, Universiti Teknologi Malaysia.

---

### **Reviewers of Journals**

- Reviewer of *Catalysis Letters*. (Springer-Verlag GmbH)
- Reviewer of *Applied Catalysis: A General*. (Elsevier B.V.)
- Reviewer of *Catalysis Communications*. (Elsevier B.V.)
- Reviewer of *Chemical Engineering Journal*. (Elsevier B.V.)
- Reviewer of *Chemical Papers*. (Springer-Verlag GmbH)
- Reviewer of *Colloid and Polymer Science*. (Springer-Verlag GmbH)
- Reviewer of *Journal of Photochemistry and Photobiology B: Biology* (Elsevier B.V.)
- Reviewer of *Materials Research Bulletin* (Elsevier B.V.)
- Reviewer of *Materials Chemistry and Physics* (Elsevier B.V.)
- Reviewer of *African Journal Pure and Applied Chemistry*
- Reviewer of *Buletin Kimia* (Department of Chemistry, Universiti Teknologi Malaysia).
- Reviewer of *Journal of Institute Materials of Malaysia*.
- Reviewer of *Journal of the Institution of Engineers*, Malaysia.
- Reviewer of *Jurnal Teknologi C*, Universiti Teknologi Malaysia.
- Reviewer of *Malaysian Journal of Analytical Sciences*.

### **Professional Affiliation**

- Member of the Indonesian Catalysis Society
- Member of Indonesian Physical Society
- Member of International Zeolite Association
- Member of Persatuan Sains Analisis (ANALIS), Malaysia

### **Supervision**

List of my research assistant and students:

Research officers = **3**

PhD students = **10**

MSc students = **10**

BSc students = **22**

Research Officers:

- Leiw Sook Fun (2005-2006)  
Project: Solid Chiral Catalysts
- Amelia Boon Hoo (January 2007- June 2007)  
Project: Electrically induced contractile electro-active polymer as catalyst for immiscible liquid-liquid reaction
- Sheela Chandren (2009-present)  
Project: Heterogeneous micellar catalysis

PhD, MSc and BSc students:

- **PhD programme**

Didik Prasetyoko (2002-2006) - **graduated on March 2006**

---

Project: Bifunctional Oxidative and Acid Catalysts  
Joint supervision with Assoc. Prof. Dr. Zainab Ramli and Assoc. Prof. Dr. Salasiah Endud

Fitri Hayati (2003-present) **passing PhD defense on October 2009**

Project: Novel Ti/OMS-2 as Oxidation Catalyst  
Joint supervision with Prof. Dr. Halimatun Hamdan

Eriawan Rismana (2004-present) **waiting for viva**

Project: Nanoencapsulation of CdS nanoparticles with polymer  
Joint supervision with Assoc. Prof. Dr. Salasiah Endud

Amin Eisazadeh Otaghsaraei (2007-present) **passing PhD defense on December 2009**

Project: Investigation on the Nano-Structure of Chemically Stabilised Soil  
Joint supervision with Prof. Dr. Khairul Anuar Kassim

Surya Lubis (2008-present)

Project: -

Umar Kalmar Nizar (2009-present)

Project: -

Nursyafreena Attan (2009-present)

Project: -

Nur Hidayah Mohd Ran (2009-present)

Project: -

Pratama Jujur Wibawa (2009-present)

BSc (Universitas Gadjah Mada), M.Si. (ITB)

Project: -

Joint supervision with Dr. Mohd Arif Agam (UTHM)

Syamsi Aini (2009-present)

BSc (Universitas Negeri Padang), M.Si. (Universitas Gadjah Mada)

Project: -

- **MSc programme**

Norizah Abdul Rahman (2002-2005) - **graduated on September 2005**

Project: PEO-Li-Al-MCM-41 Nanocomposite as Conducting Materials

Joint supervision with Assoc. Prof. Dr. Salasiah Endud

Helda Hamid (2003-2005) **graduated on September 2005**

Project: Fe-Porphyrin/Polymer and Fe-Porphyrin/MCM-41 as Oxidation Catalysts

Joint supervision with Assoc. Prof. Dr. Zainab Ramli and Assoc. Prof. Dr. Salasiah Endud

Ng Yun Hau (2003-present) - **graduated on August 2005**

Project: Hydrophobic Modification of NaY zeolite as Phase-Boundary Catalyst

Joint supervision with Prof. Dr. Halimatun Hamdan

---

Lim Kheng Wei (2004-present)  
Projek: Chiral solid Catalysts  
Joint supervision with Assoc. Prof. Dr. Salasiah Endud

Gui Lee Kee (2005-2008) **graduated on May 2008**  
Project: Polymer-Zeolite Nanocomposite Proton-Exchange-Membrane for Fuel Cells  
Joint supervision with Prof. Dr. Halimaton Hamdan

Yong Khun Fong (2005-2008) **graduated on May 2008**  
Project: Transesterification with amphiphilic zeolite  
Joint supervision with Assoc. Prof. Mohd Nazlan Mohd Muhid

Izan Izwan Misnon (2005-2008) **graduated on May 2008**  
Project: Catalytic oxidation of alkene by modified aerogel magnesium oxide  
Joint supervision with Prof. Dr. Halimaton Hamdan

Sheela Chandren (2006-2009) **graduated on December 2009**  
Project: Nanoporous alumina as catalyst in Friedel-Crafts alkylation of dihydroxybenzene to produce antioxidant  
Joint supervision with Assoc. Prof. Dr. Zainab Ramli

Sasha Md Nasir (2007-present) **passing viva-voce on November 2009**  
Project: Synthesis of gold nanoparticles embedded with polymeric layer for application as novel label for biological diagnostics

Amelia Boon Hoo (2007- present)  
Project: Electrically induced contractile electro-active polymer as catalyst for immiscible liquid-liquid reaction

- **BSc programme**

Izan Izwan Misnon (2004-2005) - **finished on May 2005**  
Project: Thermally Stable Hydrophobic Fluoro Functionalized Silica  
Joint supervision with Prof. Dr. Halimaton Hamdan

Amir Faizal Naidu Abdul Manan (2003-2004) - **finished on May 2004**  
Project: The Use of NaY Zeolite Covered with Alkylsilane for Simultaneous Adsorption of a Mixture of Paraquat and Dye [Graduated with 1st class honour and obtained the best presenter on his project]  
Joint supervision with Prof. Dr. Halimaton Hamdan

Chua Yew Hean (2005-2006) **finished on May 2006**  
Project: TiO<sub>2</sub> covered zeolite as photocatalyst in oxidation of benzene to phenol

Nurulashikin Mohd Ariffin (2005-2006) **finished on May 2006**  
Project: Ti/OMS-2 as photocatalyst in oxidation of alkene by aqueous hydrogen peroxide

Shahmeen Ismail (2005-2006) **finished on May 2006**  
Project: TiO<sub>2</sub> coated dye as photocatalyst in oxidation of alkene aqueous hydrogen peroxide

Farah Hannah Anuar (2006-2007) **finished on May 2007**  
Project: Electrically induced TiO<sub>2</sub> photocatalyst

---

Sim Sau Teing (2006-2007) **finished on May 2007**

Project: Synthesis of low k-dielectric materials based on polystyrene and high polarity oxide

Nur Hajarul Aswani Moamail (2006-2007) **finished on May 2007**

Project: Zeolite-Carbon composite as conducting materials

Norazlizan Abul Rashid (2007-2008) **finished on May 2008**

Project: Heterogeneous micellar catalysis for oxidation reaction

Noor Ayu Ismail (2007-2008) **finished on May 2008**

Project: Heterogeneous micellar catalysis for acid reaction

Jessie Jessica Anak Robin (2007-2008) **finished on May 2008**

Project: Electrically induced heterogeneous catalysis for oxidation reaction

Raazatul Aidah Abd Latif (2007-2008) **finished on May 2008**

Project: Electrically induced heterogeneous catalysis for acid reaction

Norshahida Zamahsari (2007-2008) **finished on May 2008**

Project: Synthesis of biomimetic materials and its catalytic properties in oxidation reaction

Intan Dayana Samsuri (2007-2008) **finished on May 2008**

Project: Synthesis of biomimetic materials and its catalytic properties in acid reaction

Ng Kar Fai (2008-present)

Project: Hydrogen storage materials

Ang Wai Leong (2008-present)

Project: Hydrogen storage materials

Salmi Fathiyah Sheikh Salim (2009-present)

Project: -

Siti Shahidaan bt Abdul Aziz (2009-present)

Project: -

Noorulsyahidaini Golbaha (2009-present)

Project: -

Lai Sin Yuan (2009-present)

Project: -

Hidayati Bt Mohamad Mukhair (2009-present)

Project: -

Wan Faizal Wan Ahmad (2009-present)

Project: -

### **Teaching**

- Quantum Chemistry (SSC 2463 - Sem 1 - 2009/2010)
- Quantum Chemistry and Spectroscopy (SSC 2463 - Sem 1 - 2008/2009)

- 
- Industrial Chemical Process (SSC2423 - Sem 2 2007/2008)
  - Physical Chemistry II (SSC2413 - Sem 1 2006/2007)
  - Materials Chemistry (SSK3752 - Sem 2 2004/2005 - Sem 1 2005/2006)
  - Advance Spectroscopy (SSK3423/MSK1453 - Sem 2 - 2003/2004)
  - Quantum Chemistry and Spectroscopy (SSK 3443 - Sem 1 - 2004/2005 - SSK 2463 Sem 1 -2007/2008)

#### ***Examiner of PhD and MSc students***

##### **External examiner**

- A. Kalilur Rahiman (PhD student, Department of Inorganic Chemistry, University of Madras, India) 14 February 2008. External *Examiner of PhD thesis*

##### **Internal examiner**

- PhD and MSc students of Department of Chemistry, Faculty of Science and Faculty of Chemical and Natural Resources Engineering, UTM since 2004.

#### ***Mailing Address***

Ibnu Sina Institute for Fundamental Science Studies  
Universiti Teknologi Malaysia, 81310 UTM Skudai, Johor, Malaysia  
Fax; +60-7-5536080  
E-mail: [hadi@kimia.fs.utm.my](mailto:hadi@kimia.fs.utm.my)  
[hadi@ibnusina.utm.my](mailto:hadi@ibnusina.utm.my)  
URL: <http://www.hadinur.com>