

Curriculum Vitae

Name: Dhammike Prasad Dissanayake.

Address: Department of Chemistry, University of Colombo, Colombo 3, Sri Lanka

Educational qualifications

B.Sc. University of Peradeniya, Sri Lanka. 1985.

M.Phil. University of Peradeniya, Sri Lanka. 1989.

Ph.D. Texas A&M University, College Station, Tx 77843, USA. 1993.

Post doctoral fellow, Texas A&M University, USA. 2000-2001

Awards

5. **Presidential research award 2003.**

4. **Young Scientist award in Chemistry 2003.**

Third world academy of Science, Italy and NSF Sri Lanka

3. **Merit award for scientific research, National Science Foundation, Sri Lanka, 2001.**

Method development for analysis and control of organic pollutants in diesel exhaust.

2. **Coomaraswami prize** – For the best performance in the B.Sc. examination, University of Peradeniya (1985).

1. **University Scholarship** – For the best performance in the B.Sc. examination, University of Peradeniya (1985).

Publications in refereed journals

16. Biopharmaceutical Constants for Carbamazepine Immediate Release Tablets in Simplifying Bioequivalence Studies.

Mangala Nanayakkara, W. Pathirana and **D.P. Dissanayake**.

Indian Journal of Pharmacy 68 (2006) 47-52..

15. Absolute pK_a determination for N-phenylbenzohydroxamic acid derivatives.

R.Senthilnithy, H. D. Gunawardhana, M.D.P.De Costa and **D.P. Dissanayake**

Journal of Molecular Structure: THEOCHEM 761 (2006) 21-26.

14. Contribution of dissolved sulfates and sulfites in hydrogen sulfide emission from stagnant water bodies in Sri Lanka.

Kularatne K.I.A, **Dissanayake D.P.**, Mahanama, K.R.R.

Chemosphere 52 (2003) 901-907.

13. The direct formation of H₂O₂ from H₂ and O₂ over colloidal palladium.

Dhammike P. Dissanayake and Jack H. Lunsford.

Journal of Catalysis 214 (2003) 113-120.

12. Evidence for the role of colloidal palladium in the catalytic formation of H₂O₂ from H₂ and O₂.
Dhammike P. Dissanayake and Jack H. Lunsford.
Journal of Catalysis 206 (2002) 173.
11. Carbon formation during volatile organic compound oxidation over a nickel catalyst.
Jayathilaka, G.D.L.P, Hettige, C., Mahanama, K.R.R., **Dissanayake, D.P.**
Indian Journal of Chemistry-(Section A) 40A (2001) 392.
10. Cyclohexane oxidation and carbon deposition over metal oxide catalysts.
Hettige, C., Mahanama, K.R.R.M., **Dissanayake, D.P.**
Chemosphere 43/8 (2001) 1079.
9. Site differentiation in homolytic Vs. heterolytic activation of methane over Ba/MgO catalysts.
Dissanayake Dhammike, Lunsford Jack H. and Rosynek Michael P.
Journal of Catalysis 146(2) (1994) 613.
8. The role of water in promoting the oxidative dehydrogenation of ethane.
Jack H. Lunsford, Edrick Morales, **Dhammike Dissanayake** and Chunlei Shi.
International Journal of Chemical Kinetics 26 (1994) 921.
7. Spectroscopic characterisation of surface oxygen species on Barium-containing methane coupling catalysts.
Michael P. Rosynek, **Dhammike Dissanayake** and Jack H. Lunsford.
New Developments in Selective Oxidation II, edited by V. Cortes Corberan and S. Vic Bellon, Elsevier Science B.V. (1994) 345.
6. Oxidative coupling of methane over oxide supported barium catalysts.
Dhammike Dissanayake, Jack H. Lunsford and Michael P. Rosynek.
Journal of Catalysis 14, (1993) 286.
5. Are the equilibrium concentrations of CO and H₂ exceeded during the oxidation of CH₄ over a Ni/Yb₂O₃ catalyst?
Dhammike Dissanayake, Michael P. Rosynek and Jack H. Lunsford.
Journal of Physical Chemistry 97 (1993) 3664.
4. Catalytic partial oxidation of methane over Ba-Pb, Ba-Bi and Ba-Sn perovskites.
Dhammike Dissanayake, Karl C.C. Kharas, Jack H. Lunsford and Michael P. Rosynek.
Journal of Catalysis 139 (1993) 652.
3. Partial oxidation of methane to carbon monoxide and hydrogen over a Ni/Al₂O₃ catalyst.
Dhammike Dissanayake, Michael P. Rosynek, Karl C.C. Kharas and Jack H. Lunsford.
Journal of Catalysis 132 (1991) 117.
2. Photoreduction of nitrogen and water on montmorillonite clays loaded with hydrous ferric oxide.
O.A Ileperuma, W.C.B Kiridena and **W.D.D.P Dissanayake**.
Journal of Photochemistry and Photobiology(A: Chemistry) 59 (1991) 191.

1. Photocatalytic behaviour of metal doped titanium dioxide. Studies on the photochemical synthesis of ammonia on Mg/TiO₂ catalyst systems.
O.A. Ileperuma, K. Tennakoon, **W.D.D.P Dissanayake**.
Applied catalysis 62, (1990) L1-L5

Books

4. **VOCs Combustion on Metal Oxides**
[Chapter in Metal Oxides: Chemistry and Applications]
ISBN 10:0-8247-2371-6
Edited by J.L.G. Fierro, CRC Press. 2006.
3. **Catalytic methods to Reduce Gaseous Environmental Pollutants**
[Chapter in Industry and Environment]
ISBN 955-9244-27-2
Institute of Chemistry, Ceylon, 2005.
2. **Electronic spectroscopy of molecules**
ISBN 955-23-0835-6
The Open University Press, Sri Lanka, 2000.
1. **Advanced Physical Chemistry - Reaction Kinetics**
ISBN 955-23-0741-4
The Open University Press, Sri Lanka, 1998.

Theses Supervised

Co supervisor

A study on the variation of cannabinoids content in cannabis sativa in Sri Lanka to distinguish the fibre type plants from drug type plants.

(K.P.C. Ukwatte, Master of Science, University of Colombo, 2005)

Co supervisor

Transesterification of coconut oil.

(R.R.J. Perera, Master of Science, University of Colombo, 2004)

Co supervisor

Impurities, adulterants and diluents of illicit heroin in Sri Lanka.

(P. S. K. Rajapakse, Master of Science, University of Peradeniya, 2000)

Co supervisor

Method Development for analysis and control of organic pollutants in diesel exhaust.

(C. Hettige, Master of Philosophy, University of Colombo, 1997, Not completed)

Co supervisor

Determination of organic pollutants in diesel exhaust.

(A. Thiyakesan, Master of Science, University of Colombo, 1996)

Supervisor

Adsorption studies on charcoal derived from coir dust.

(S. Baskaran, Master of Science, University of Colombo, 1995.)

Abstracts published

10. A comparative study of oxygen adsorption on palladium and platinum using density functional theory calculations.
Perera H.U.A., **Dissanayake, D.P.**
Proc. Sri Lanka Assoc. Adv. Sci. 2003, 213.
9. Preparation of carbon black natural rubber latex master batches using a novel dispersing agent.
Milani M.D.A., Nilmini, A.H.L.R., Chandralal, H.N.K.K., Fernando, O.U.N.H.,
Dissanayake D.P.
Proc. Sri Lanka Assoc. Adv. Sci. 2003, 212.
8. Effect of MgO on carbon deposition over a Ni/Al₂O₃ catalyst, an investigation by FTIR
C.Hettige, G.D.L.P. Jayathilaka, K.R.R. Mahanama, **D.Dissanayake.**
Proc. Sri Lanka Assoc. Adv. Sci. 1998, 300.
7. Development of a low cost sampling and analytical method to determine polycyclic aromatic hydrocarbons in air.
A. Thiyakesan, **D.P Dissanayake**, K.R.R Mahanama.
Proc. Sri Lanka Assoc. Adv. Sci. 1997, 363.
6. Preparation and characterisation of charcoal from coir dust.
R.D.A Wickramanayake, P. Ganhewage **D.P Dissanayake.**
Proc. Sri Lanka Assoc. Adv. Sci. 1997, 359.
5. Effect of the support on carbon deposition over a nickel catalyst during catalytic oxidation of hydrocarbons at low oxygen partial pressures.
Chaminda Hettige and **Dhammike Dissanayake.**
Chem. in Sri Lanka. vol. 14, No.1, 1997,12.
4. Kinetics and the mechanism of photooxidation of ammonia in aqueous solution.
O.A Ileperuma and **W.D.D.P Dissanayake.**
Chem. In Sri Lanka, vol 5, 1988, 8.
3. Photocatalytic behaviour of metal doped titanium dioxide. Studies on the photosynthesis of ammonia on Mg/TiO₂ catalyst systems.
W.D.D.P Dissanayake and O.A Ileperuma.
Proc. Sri Lanka Assoc. Adv. Sci. 1988, 190.
2. Enhanced photoreduction of N₂ on supported iron oxide catalysts.

W.D.D.P Dissanayake and O.A Ileperuma.
Proc. Sri Lanka Assoc. Adv. Sci. 1987, 203.

1. Photocatalytic nitrogen fixation I. Observation of oxidative nitrogen fixation on hydrous ferric oxide.

W.D.D.P Dissanayake, F.N.S Weerasinghe and O.A. Ileperuma.
Proc. Sri Lanka Assoc. Adv. Sci. 1986, 169.

Conference proceedings

4. Direct production of hydrogen peroxide from H₂ and O₂ over palladium: The state of the working catalyst.

D.P Dissanayake and J. H. Lunsford.
Symposium on Oxidation Catalysts, Southwest Catalyst Conference, College Station, Texas, USA. May 2001.

3. Characterisation of oxide-supported barium catalysts for the oxidative coupling of methane to C₂ products.

M.P. Rosynek, **D. Dissanayake** and J.H. Lunsford.
Symposium on solid state catalysis and its use in organic synthesis, South west regional American Chemical Society Meeting, Austin, Texas, USA. October 24-27, 1993.

2. Characterisation of oxygen species responsible for methane activation over metal oxides.

Dhammike Dissanayake.
South West Catalysis Conference, College Station, Texas, USA, April 1993.

1. Partial oxidation of methane over a Nickel/Alumina catalyst.

Dhammike Dissanayake, Michael P. Rosynek and Jack H. Lunsford.
South West catalysis conference, Houston, USA, April 1990.

Positions held

Visiting lecturer posts

University of Kelaniya (Chemical Kinetics and Surface Analytical Chemistry)

University of Ruhuna (Polymer Chemistry)

Sabaragamuwa University of Sri Lanka (Phase Equilibria)

University of Colombo M.Sc. Analytical Chemistry and Diploma in Chemical Analysis.

Post Doctoral Fellow, Texas A&M University, 2000-2001.

Member of the board of study in chemical sciences of the postgraduate institute of science. University of Peradeniya, 1997-1998.

Member, Sri Lanka Association for Advancement of Science.

Member, Institute of Chemistry Ceylon.