

## ***BIOGRAPHICAL SKETCH (at a glance) of Dr. I. D. MALL***

### **Dr. I. D. Mall**

#### **Professor,**

Department of Chemical Engineering,  
Indian Institute of Technology, Roorkee  
Roorkee – 247 667 (Uttarakhand), India  
Tel.: +91 – 1332 – 285 319 (O), 285 106 (R), Mobile: +91 - 94129 91317  
Fax: +91 – 1332 – 276 535, 273 560  
E-mail: id\_mall2000@yahoo.co.in, invigfch@iitr.ernet.in



#### **Education:**

Ph.D. Chemical Engineering, 1993, Banaras Hindu University  
M. Sc. Engineering (Chemical Engineering), 1972, Banaras Hindu University  
B.Sc. Engineering Chemical Engineering, 1970, Banaras Hindu University

#### **Professional Experience:**

*Professor: March 2006 onwards*

*Associate Professor: June 26, 2001 - February 2006, IIT Roorkee*

*Assistant Professor: April 1, 1996 - June 25, 2001, IIT Roorkee*

*Lecturer: February 19, 1990 - April 10, 1996, IIT Roorkee*

*Assistant In-charge Pulp mill: October, 1977 - January 1990, Orient Paper Mills Ltd., Brajrajnagar, Orissa*

*Senior research fellow: 1973 - September, 1977, Banaras Hindu University*

#### **Award & Recognition:**

1. Institution of Engineers “The Nawab Zain Jung Bahadur Memorial Medal for 1996 - 97” in area of Environment
2. The Journal of Solid Waste Technology and Management (U.S.A) “RUSSELL ACKOFF AWARD” 2003 for Best paper
3. Biographical profile included in Marquis “Who’s Who in the World 2005” and Who’s Who in Science and Engineering 2006 – 07”
4. Shiksha Ratan Puraskar by India International Friendship Society, 2007.

**Research interest:** Environmental Engineering, Hydrocarbon Engineering, Adsorption, Coagulation, Pulping and Recovery

#### **Research collaborations:**

All India Council of Technical Education:

*Studies of Paper Industry Waste and Development of Waste Management Information System: 5 Lakh*

University Grants Commission, New Delhi, India:

*Detoxification and Decolorisation of Pulp and Paper Mill Effluent: 3.4 Lakh*

Ministry of Human Resource & Development:

*Modernisation Pollution Abatement Laboratory: 12 Lakh*

*Adsorptive treatment of Recalcitrant and refractory pollutants from waste water: 24 Lakh*

Industrial projects handled: Total: 12

**Research publications:** Total: 117

**International Journals:** 23

**National Journals:** 41

**International Conferences/National Conferences:** 53

**Contributed in Books:**

**Books:**

1. "Petrochemical Process Technology" published by Macmillan India Ltd. 2007

**Chapters:**

1. "Corrosion Handbook", Associated (Data) Publisher Pvt. Ltd., Hyderabad.
  1. Corrosion and selection of materials of construction in Fertiliser Plants
  2. Corrosion and selection of materials of construction in Pulp and Paper Mills
- B. One chapter on "Waste management in Pulp & Paper Industry Waste" published in book, "Re-utilisation of Industrial Effluents and Waste" Ed. R. K. Baslass, A. K. Srivastava, Pragati Prakashan, Meerut

**Professional and honour societies:**

Active Member of India Pulp and Paper Technical Association, Life Member of Indian Association of Air Pollution Control

**Professional Service:**

Expert Board of Studies, Department of Chemical Engineering, M.J.P Rohilkhand University, Bareilly, 2003-04, 2006-07.

Expert Board of Studies in U.P. Technical University, 2004

Participated in syllabus and curriculum development of B. Tech in Chemical Engg. and B.Tech in Chemical Technology courses, Department of Chemical engineering, M.J.P Rohilkhand University, Bareilly, 2003-04, U.P. Technical University, 2004

Assistant Editor, Environmental Conservation Journal.

**Referee/reviewer in journals:**

***International:***

Chemical Engineering Science, Journal of Hazardous Materials, Journal of Environmental Management, Colloids and Surfaces, A: Physicochemical and Engineering Aspects, Chemical Engineering Journal, Journal of Colloid & Interface Science (All Published by Elsevier).

***National:***

Reviewer in Journal of Indian Institute of Science and Indian Journal of Chemical Technology

**Short term courses organized for field engineers and faculty from technical educations as resource Persons:** 11

**Participation in Short term courses for field engineers and faculty from technical educations as resource Persons:** 26

### ***Selected recent publication (2005 onwards):***

1. Lataye, Dilip H.; Mishra, Indra M.; Mall, Indra D. Adsorption of 2-picoline onto bagasse fly ash from aqueous solution. *Chemical Engineering Journal*, 2007 (Accepted).
2. Sahu AK, Mall ID, Srivastava VC. Studies on the adsorption of furfural from aqueous solution onto low-cost bagasse fly ash. *Chemical Engineering Communications* (Accepted 2007).
3. Srivastava VC, Mall ID, Mishra IM. Optimization of parameters for adsorption of metal ions onto rice husk ash using taguchi's experimental design methodology. *Chemical Engineering Journal* (2007), doi:10.1016/j.cej.2007.09.030.
4. Srivastava VC, Mall ID, Mishra IM. Removal of Cadmium(II) and Zinc(II) Metal Ions from Binary Aqueous Solution by Rice Husk Ash. *Colloids and Surfaces, A: Physicochemical and Engineering Aspects* (In Press, 2007) doi:10.1016/j.colsurfa.2007.06.048.
5. Srivastava VC, Mall ID, Mishra IM. Adsorption of toxic metal ions onto activated carbon. Study of sorption behaviour through characterization and kinetics. *Chemical Engineering and Processing* (In Press, 2007) doi:10.1016/j.cep.2007.04.006.
6. Srivastava VC, Mall ID, Mishra IM. Multi-Component Adsorption Study of Metal Ions onto Bagasse Fly Ash using Taguchi's Design of Experimental Methodology. *Industrial & Engineering Chemistry Research* 46 (2007) 5697-5706.
7. Srivastava VC, Mall ID, Mishra IM. Adsorption thermodynamics and isosteric heat of adsorption of toxic metal ions onto bagasse fly ash (BFA) and rice husk ash (RHA). *Chemical Engineering Journal* 132(1-3) (2007) 267-278.
8. Mane V, Mall ID, Srivastava VC. Kinetic and equilibrium isotherm studies for the adsorptive removal of brilliant green dye from aqueous solution by rice husk ash. *Journal of Environmental Management* 84 (2007) 390-400.
9. Mall ID, Agarwal NK, Srivastava VC. Adsorptive Removal of Auramine-O: Kinetic and Equilibrium Study. *Journal of Hazardous Materials* (2007), 143(1-2) (2007) 386-395.
10. Mane V, Mall ID, Srivastava VC. Use of Bagasse Fly Ash as an Adsorbent for the Removal of Brilliant Green Dye from Aqueous Solution. *Dyes Pigments* 73 (2007) 269-278.
11. Mahesh S, Prasad B, Mall ID, Mishra IM. Electrochemical degradation of pulp and paper mill wastewater. Part 1. COD and color removal, *Industrial and Engineering Chemistry Research* 45 (2006) 2830-2839.
12. Mahesh S, Prasad B, Mall ID, Mishra IM. Electrochemical degradation of pulp and paper mill wastewater. Part 2. Characterization and analysis of sludge. *Industrial and Engineering Chemistry Research* 45(16), 5766, (2006)
13. Lataye DH, Mishra IM, Mall ID. Removal of pyridine from aqueous solution by adsorption on bagasse fly ash. *Industrial and Engineering Chemistry Research* 2006;45 (11):3934-43.
14. Mall ID, Srivastava VC, Agarwal NK. Removal of Orange-G and Methyl Violet dyes by adsorption onto bagasse fly ash- kinetic study and equilibrium isotherm analyses. *Dyes Pigments* 69 (2006) 210-223.
15. Srivastava VC, Swamy M.M, Mall ID, Prasad B, Mishra IM. Adsorptive Removal of Phenol by Bagasse fly ash and Activated Carbon: equilibrium, kinetics and thermodynamic study. *Colloids and Surfaces, A: Physicochemical and Engineering Aspects* 272 (2006) 89-104.
16. Srivastava VC, Mall ID, Mishra IM. Equilibrium Modelling of Single and Binary Adsorption of Cadmium and Nickel onto Bagasse Fly Ash. *Chemical Engineering Journal* 117(1) (2006) 79-91.
17. Mall ID, Srivastava VC, Kumar GVA, Mishra IM. Characterization and utilization of mesoporous fertilizer plant waste carbon for adsorptive removal of dyes from aqueous solution. *Colloids and Surfaces, A: Physicochemical and Engineering Aspects* 278(1-3) (2006) 175-187.
18. Srivastava VC, Mall ID, Mishra IM. Characterization of mesoporous rice husk ash (RHA) and adsorption kinetics of metal ions from aqueous solution onto RHA. *Journal of Hazardous Materials* B134 (2006) 257-267.

19. Srivastava VC, Mall ID, Mishra IM. Modelling Individual and Competitive Adsorption of Cadmium(II) and Zinc(II) Metal Ions from Aqueous Solution onto Bagasse Fly Ash. *Separation Science and Technology* 41 (2006) 2685–2710.
20. Srivastava VC, Mall ID, Mishra IM. Treatment of Pulp and Paper Mill Wastewaters with Poly Aluminium Chloride and Bagasse Fly Ash. *Colloids and Surfaces, A: Physicochemical and Engineering Aspects* 260 (2005) 17-28.
21. Mall ID, Srivastava VC, Agarwal NK, Mishra IM. Removal of Congo Red from Aqueous Solution by Bagasse Fly Ash and Activated Carbon: Kinetic Study and Equilibrium Isotherm Analyses. *Chemosphere* 61 (2005) 492-501.
22. Mall ID, Srivastava VC, Agarwal NK, Mishra IM. Adsorptive Removal of Malachite Green Dye from Aqueous Solution by Bagasse Fly Ash and Activated Carbon- Kinetic Study and Equilibrium Isotherm Analyses. *Colloids and Surfaces, A: Physicochemical and Engineering Aspects* 264 (2005) 17-28.

### ***Selected recent publications in Conferences and Symposium (2005 onwards):***

1. Mall ID, Srivastava VC, Saurabh Singh, Sinha S. Safety and Hazards Management in Pulp and Paper Industry. *Proceedings of Safety Convention 2007*. Organized by Safety and Quality Forum, The Institution of Engineers (India) and Quality Council of India, Hotel Le Meridien, New Delhi, INDIA, September 5 to 7, 2007.
2. Singh Saurabh, Mall ID, Pollution Prevention through process Integration, *Proceedings of National Conference on Advances in Chemical Engineering & Technology (ACET-07)*, 26-27 March 2007. Page: 248.
3. Singh Saurabh, Mall ID, Airlift Reactors: Characterization, Application & Recent Advances, *Proceedings of National Conference on Advances in Chemical Engineering & Technology (ACET-07)*, 26-27 March 2007. Page: 166.
4. Lataye DH, Mishra IM and Mall ID. Removal of Pyridine from Aqueous Solution by Adsorption on Commercial Grade Granular Activated Carbon (GAC). *National Conference on "Emerging Technology and Developments in Civil Engineering"* Organised by Department of Civil Engineering, Govt. College of Engineering, Amravati on 22<sup>nd</sup>-23<sup>rd</sup> March, 2007.
5. Lataye DH, Mishra IM and Mall ID. Adsorptive Removal of Pyridine from Aqueous Solution by Rice Husk Ash. *All India Seminar on "Energy and Environmental Issues Related to Chemical Industry"*, Organised by The Institution of Engineers (India) U.P. State Centre, Lucknow in association with Harcourt Butler Technological Institute, Kanpur, U.P. on 10<sup>th</sup> - 11<sup>th</sup> March, 2007.
6. Lataye DH, Mishra IM and Mall ID. Adsorptive Removal of Pyridine and its Derivatives by using Cheap Adsorbents. *National seminar on "Technology for Sustainable- Development-Perspective and Strategies"* Institute of Technology, Guru Ghasidas University, Bilaspur (Chhattisgarh). 6<sup>th</sup> -7<sup>th</sup> January, 2007.
7. Mahesh S., Prasad B., Mall ID and Mishra IM. electrochemical Technology for the Treatment of High Strength Wastewaters. *National seminar on "Technology for Sustainable- Development-Perspective and Strategies"* Institute of Technology, Guru Ghasidas University, Bilaspur (Chhattisgarh). January 6-7, 2007.
8. Singh Saurabh, Mall ID, Singh SKP, Kumar K. Kiran, Cleaner Production : Case study in Pulp and Paper Industry. *International Conference on Cleaner Technologies and Environmental Management*. Pondicherry, India, 4-6 January, 2007.
9. Mahesh S., Prasad B., Mall ID, Mishra IM. (Electrochemical Degradation of Pulp and Paper Mill Wastewater) at *International Symposium on "Advances in Electrochemical Science and Technology"* at Goa, November 28-30, 2006.

10. Srivastava V.C., Mall I.D., Mishra I.M., Competitive antagonistic adsorption of nickel(II) and zinc(II) metal ions from aqueous solution onto bagasse fly ash, 11<sup>th</sup> APCCChE congress, Asian Pacific Confederation of Chem. Eng., Kuala Lumpur, Malaysia, 27-30 August, (2006).
11. Mall ID, Srivastava VC, Kumar S, Kumar K. Environmental impact assessment of the petrochemical industry. All India Seminar on Environmental Impact Assessment. Udaipur, INDIA, August 18-19, 2006.
12. Srivastava VC, Mall ID, Kumar S. Issues in Plastic waste management: Indian perspective. Proceedings of All India Seminar on Frontier Areas of Chemical Engineering: Strategies for Future, Organized by The Institution of Engineers (India), U.P. State Centre, Lucknow, INDIA, March 18-19, 2006.
13. Mall ID, Srivastava VC, Lataye DH, Kumar K. Air pollution from cement manufacture. Proceedings of All India Seminar on Air Pollution & health Impacts (AISAPHI), Organized by The Institution of Engineers (India), Roorkee Local Centre, Roorkee, INDIA, February 23-24, 2006.
14. Mall ID, Srivastava VC, Mahesh S, Kumar S. Air pollution from kraft pulp mill and its impact on environment. Proceedings of All India Seminar on Air Pollution & health Impacts (AISAPHI), Organized by The Institution of Engineers (India), Roorkee Local Centre, Roorkee, INDIA, February 23-24, 2006.
15. Srivastava VC, Mall ID, Sahu AK. Plastic waste management in India: an overview. Proceedings of National Seminar on Recent Trends in Science, Technology & Its Applications, Organized by S.D. College of Engineering & technology, Muzaffarnagar, INDIA, January 7-8, 2006.
16. Mall, I.D., Srivastava, V.C., A.K. Sahu, Bhawna Singh. "Safety and Hazards in Ammonia Handling, storage and transportation" "Managing Safety: Challenges of occupational safety & health" Organized by Safety and Quality Forum, The Institution of Engineers (India) and Quality Council of India. Sep 28-30, 2005.
17. Mall, I.D., Srivastava, V.C., Bhawna Singh. Environmental protection in pulp and paper manufacture through cleaner technologies. XXI National Convention of Chemical Engineers, Indian Chemical Industry Vision 2020, 2-4 September, 2005 Udaipur, INDIA
18. Mall I.D., Srivastava V.C. Life cycle assessment of cement manufacture. XXI National Convention of Chemical Engineers, Indian Chemical Industry Vision 2020, 2-4 September, 2005 Udaipur, INDIA. .
19. Mall, I.D., Srivastava, V. C., Gupta R.K. Safety and Hazards in Handling of Chlorine: A Critical Appraisal. Proceedings "Managing Safety: Challenges Ahead" Organized by Safety and Quality Forum, The Institution of Engineers (India) and Quality Council of India. February 14-16, 2005.
20. Mahesh, S., Mall, I.D., Prasad, B., Mishra, I.M., " Critical Appraisal of Wastewater Management Strategies for Pulp and Paper Manufacturing Industries", International Conference on Water & Health, J.S.S.M., Mysore on January 22-23, 2005.