

## Publications

### ➤ Publications in peer reviewed International Journals

1. **Dash, S. K.,** Samanta, A. N., Bandyopadhyay, S. S. (2014). Simulation and Parametric Study of the Post Combustion CO<sub>2</sub> Capture using aqueous 2-Amino-2-methyl-1-propanol and Piperazine. *International Journal of Greenhouse Gas Control*. 21, 130-139 (2014). (Elsevier, ISSN: 1750-5836, Impact factor – 5.1)
2. **Dash, S. K.,** Bandyopadhyay, S.S. (2013). Carbon Dioxide Capture: Absorption of Carbon Dioxide in Piperazine Activated Concentrated Aqueous 2-Amino-2-Methyl-1-Propanol. *Journal of Clean Energy Technologies*, Vol. 1, No. 3, May 2013. (ISSN: 1793-821X)
3. **Dash, S. K.,** Samanta, A. N., Bandyopadhyay, S. S.(2012). Experimental and Theoretical Investigation of Solubility of Carbon Dioxide in Concentrated Aqueous Solution of 2-Amino-2-methyl-1-propanol and Piperazine. *The Journal of Chemical Thermodynamics*. 51 (2012) 120-125. (Elsevier, ISSN: 0021-9614, Impact Factor – 2.794)
4. **Dash, S. K.,** Samanta, A., Samanta, A. N., Bandyopadhyay, S. S. (2011). Vapour Liquid Equilibria of Carbon Dioxide in Dilute and Concentrated Aqueous Solutions of Piperazine at Low to High Pressure. *Fluid Phase Equilibria* 300 (2011) 145 – 154 (Elsevier, ISSN: 0378-3812, Impact Factor–2.253).
5. **Dash, S. K.,** Samanta, A. N., Bandyopadhyay, S. S. (2011). (Vapour + liquid) equilibria (VLE) of CO<sub>2</sub> in aqueous solutions of 2-amino-2-methyl-1-propanol: New data and modelling using eNRTL-equation. *The Journal of Chemical Thermodynamics* 43 (2011) 1278-1285. (Elsevier, ISSN: 0021-9614, Impact Factor – 2.794)
6. **Dash, S. K.,** Samanta, A., Samanta, A. N., Bandyopadhyay, S. S. (2011). Absorption of Carbon Dioxide in Piperazine Activated Concentrated Aqueous 2-Amino-2-methyl-1-propanol Solvent. *Chemical Engineering Science* 66 (2011) 3223-3233. (Elsevier, ISSN: 0009-2509, Impact. Factor – 2.386)
7. **Dash, S. K.,** Samanta, A. N., Bandyopadhyay, S. S. (2011). Solubility of carbon dioxide in aqueous solution of 2-amino-2-methyl-1-propanol and piperazine. *Fluid Phase Equilibria* 307 (2011) 166-174. (Elsevier, ISSN: 0378-3812, Impact factor – 2.253)

### ➤ Publications in National Journal

8. Jena H. M., **Dash S. K.**, , Suryanarayana A., “Dynamics and Control of a Computer Controlled Bubble Cap Distillation Column, *Journal of the Institution of Engineers (India)*, Vol. 86, September 2005.

### ➤ International Conference Presentations/Publications in proceedings

1. **Dash S. K.**, Bhatt, K. (2014). Recent developments in fossil fuel based energy infrastructure: A review of carbon capture and sequestration technology. International Conference on Energy and Infrastructure- ICEI-2014, 11-12, January, 2014, PDP, Gandhinagar, **India**.
2. **Dash, S. K.**, Bandyopadhyay, S. S. (2013) Carbon Dioxide Capture: Absorption of Carbon Dioxide in Piperazine Activated Concentrated Aqueous 2-Amino-2-Methyl-1-Propanol. International Conference on Future Environment and Energy– ICREE 2013, 24-25, February, 2013, **Rome, Italy**.
3. **Dash, S. K.**, Mishra, D., Naidu, S. V., Samanta, A. N. and Bandyopadhyay, S. S. (2011) Carbon dioxide Capture: Absorption of Carbon dioxide in Piperazine Activated Concentrated aqueous N-methyldiethanol amine. 14 ACC (*Separation, Storage and Utilization of CO<sub>2</sub>, Symposium of 14<sup>th</sup> Asian Chemical Congress* ([www.14acc.org](http://www.14acc.org)), 5-8 September, 2011, **Bangkok, Thailand**.
4. **Dash, S. K.**, Samanta, A., Samanta, A. N. and Bandyopadhyay, S. S. (2011) Absorption of Carbon Dioxide in Piperazine Activated Concentrated Aqueous 2-Amino-2-methyl-1-propanol Solvent. **GLS10, 10<sup>th</sup> International Conference on Gas-Liquid and Gas-Liquid-Solid Reactor Engineering**, ([www.gls10.org](http://www.gls10.org) ). Universidade do Minho, **Braga, Portugal**.
5. **Dash, S. K.**, Samanta, A. N. and Bandyopadhyay, S. S. (2011) Post-Combustion CO<sub>2</sub>-Capture: Thermodynamic study of CO<sub>2</sub> in Piperazine Activated Concentrated Aqueous 2-Amino-2-Methyl-1-propanol. **GLS10, 10<sup>th</sup> International Conference on Gas-Liquid and Gas-Liquid-Solid Reactor Engineering**, ([www.gls10.org](http://www.gls10.org) ). Universidade do Minho, **Braga, Portugal**.

➤ **Presentation/Publications in National Conference Proceedings:**

1. **Dash S. K.**, and Bandyopadhyay, S. S. (2013). Post combustion CO<sub>2</sub> capture: Vapour-liquid equilibrium of CO<sub>2</sub> in Piperazine Activated Aqueous Solutions of N-Methyldiethylamine and Sulfolane. Indian Chemical Engineering Congress (*CHEMCON-2013*), ICT, Mumbai, December-2013. (*Best paper presentation in the Advanced separation techniques technical session*)
2. **Dash, S. K.**, Samanta, A. N. and Bandyopadhyay, S. S. (2012). Simulation and Parametric Study of the Post Combustion CO<sub>2</sub> Capture using Aqueous 2-Amino-2-methyl-1propanol and Piperazine Blended solvent. *CHEMCON-2012*, 27-30, December, 2012, NIT **Jalandhar, India**.
3. **Dash, S. K.**, Mishra, D., Samanta, A. N. and Bandyopadhyay, S. S. (2011) Post Combustion CO<sub>2</sub> Capture with Activated MDEA: Experimental and Thermodynamic Modelling of Phase Equilibrium Using Aspen Plus. *CHEMCON-2011*, Indian Institute of science/MSRIT, **Bangalore**, December 2011.
4. **Dash, S. K.**, Naidu, S. V., Samanta, A. N. and Bandyopadhyay, S. S. (2011) Kinetics of CO<sub>2</sub> Absorption into Activated AMP Solvent Used for Post Combustion CO<sub>2</sub> Capture from Coal Based Power Plants: Experimental investigation and modelling. *CHEMCON-2011*, Indian Institute of science/MSRIT, **Bangalore**, December 2011

5. **Dash, S. K.**, Samanta, A. N., Bandyopadhyay, S. S. (2010) An Electrolyte NRTL Model for the VLE of CO<sub>2</sub> in 2-Amino-2-Methyl-1-Propanol Activated with Piperazine. Indian Chemical Engineering Congress (*CHEMCON-2010*), Annamalai University, **Chidambaram**, Tamil Nadu.
6. **Dash, S. K.**, Samanta, A. N., Bandyopadhyay, S. S. (2010) Enthalpies of Absorption of CO<sub>2</sub> in Solvents for Post-Combustion CO<sub>2</sub> Capture from Coal Fired Power Plants. Paper presented at the Indian Chemical Engineering Congress (*CHEMCON-2010*), Annamalai University, **Chidambaram**, Tamil Nadu.
7. **Dash, S. K.**, Samanta, A. N., Bandyopadhyay, S. S. (2009) Modeling Vapour-Liquid equilibria of Carbon dioxide in aqueous Piperazine using the electrolyte NRTL model. Indian Chemical Engineering Congress (*CHEMCON-2009*), Andhra University, **Visakhapatnam**.
8. **Dash, S. K.**, Maharana, A., Bandyopadhyay, S. S. (2009) Simulation of CO<sub>2</sub> capture from Coal fired power plant: Integrating the Absorption process and Steam cycle. Indian Chemical Engineering Congress (*CHEMCON-2009*), Andhra University, **Visakhapatnam**.
9. **Dash, S. K.**, Bandyopadhyay, S. S. (2009) Modeling the VLE of Carbon Dioxide in Aqueous Piperazine using Aspen Plus<sup>®</sup>. Paper presented at the National conference on *Carbon Dioxide Capture and Sequestration- Challenges for Engineers*. (*NCCS-09*), **Anand**, Gujarat.
10. **Dash, S. K.**, Samanta, A., Bandyopadhyay, S. S. (2008) Vapour-Liquid Equilibrium of CO<sub>2</sub> in Piperazine Activated Aqueous AMP. Indian Chemical Engineering Congress (*CHEMCON-2008*), Punjab University, **Chandigarh**.
11. **Dash S. K.**, Rao, G. S., (2003) Prediction of Liquid-Liquid Equilibrium Data by UNIQUAC Activity Coefficient Model for Hydrocarbon Solvent System. Indian Chemical Engineering Congress (*CHEMCON-2003*), **Bhubaneswar**.
12. **Dash S. K.**, (2005) Commercialization of Biodiesel, a Green Technology. Paper presented at All India Seminar on “Waste Management at Chemical & Allied Industries, Vision- 2020. Oct, 2005, NIT, **Rourkela**, Orissa.
13. **Dash S. K.**, (2001) Simulating the Start-up and Shut-down of a fully automated Distillation Column. All India Seminar on “Chemical Engineering for Better Tomorrow. Nov 2001, NIT, **Rourkela**, Orissa.

➤ **Presentation/Publication in the state level conference proceedings**

1. **Dash S. K.**, (2007). Plasma Gasification of Municipal Solid Waste (MSW) to generate Electricity. Paper presented at the All India Seminar on ‘*Solid Waste Management*’. The Institution of Engineers (India). **Berhampur**, Orissa.
2. **Dash S. K.**, Mishra D. K., (2007). Environmental Implication of Flyash as an

Industrial Waste –Review of Recent Developments. Paper presented at the National Seminar on ‘*Environmental Concern and Remedies in Alumina Industry*’ (ENVICON–2007). Indian Institute of Chemical Engineers, NALCO, **Damonjodi**, Orissa.

3. **Dash S. K., (2005).** Extraction of Herbal Plant Residues by Super Critical Fluid Extraction. Proceedings of the “Seminar on Chemical Products from Agriculture & Forest Residues & Regional Conference of Orissa Chemical Society”, at JITM, Paralakhemundi, Orissa, Sept 2005.
4. **Dash S. K., (2005).** Dissolved Air Flotation Technique used in Mineral Processing Industries. Proceedings of the National seminar on “Value Addition of Zircon by Chemical & Allied Industries” The Institution of Engineers, BLC & Indian Rare Earths ltd. at Berhampur, Orissa, Feb 2005.

➤ *Technical Articles/Reports Published:*

1. Mishra D. K., **Dash S. K.** (2006). “Review of TechDIM-2006 Hosted by JITM”. Published in the souvenir released by The Institution of Engineers (India), Berhampur local Center Berhampur on 38<sup>th</sup> Engineers Day, 15<sup>th</sup> Sept. 2006.
2. **Dash S. K.** (2005). “Engineers in Environment Protection” Published in the souvenir released by The Institution of Engineers (India), Berhampur local Center Berhampur on 37<sup>th</sup> Engineers Day. 15<sup>th</sup> Sept. 2005.
3. **Dash S. K.** (2004). “Role of Chemical Engineering in National Security” Published in the souvenir released by The Institution of Engineers (India), Berhampur local Center Berhampur on 36<sup>th</sup> Engineers Day. 15<sup>th</sup> Sept. 2004.

➤ *Conference Participated:*

1. Indian Chemical Engineering Congress (CHEMCON–2002), at Hyderabad, Dec – 2002.
2. Indian Chemical Engineering Congress (CHEMCON–2004), at Mumbai, Dec – 2004.