

**Centre for Energy,
Indian Institute of Technology Guwahati**

Publications in Journal:

International Journal

Sl. No.	Details
01	L. Barbora, S. Acharya, R. Singh, K. Scott, and A. Verma, 'A novel composite Nafion membrane for direct alcohol fuel cells', Journal of Membrane Science, 326, 721-726, 2009.
02	B. B. Sahoo, N. Sahoo, and U. K. Saha, 'Effect of Engine Parameters and type of gaseous fuel on the performance of dual-fuel gas diesel engines–A critical review', Renewable and Sustainable Energy Reviews, 13,1151-1184, 2009.
03	Sushovan Chatterjee, Lepakshi Barbora, Swaranjit Singh Cameotra, Pinakeswar Mahanta & Pranab Goswami, 'Silk-Fiber Immobilized Lipase-Catalyzed Hydrolysis of Emulsified Sunflower Oil', Applied biochemistry and biotechnology, 157 (3), 593-600, 2009.
04	S. Kakati and P. Mahanta, 'Effect of fin aided burner on thermal performance of pressurized kerosene stove', Journal of Enhanced Heat Transfer (JEHT), 16(1), 2009.
05	P. Kalita, G. Mohan, G. Pradeep Kumar and P. Mahanta, 'Determination and comparison of kinetic parameters of low density biomass Fuels', Journal of Renewable and Sustainable Energy, American Institute of Physics, 1, 1-12, 2009.
06	Anil Kumar Sarma, Preety Vatsyayan, Pranab Goswami, Shelley D. Minter, 'Recent Advances in Material Sciences for Developing Enzyme Electrodes.Biosensors and Bioelectronics' 24: 2313-2322 2009).
07	M. Sharma and S.C Mishra and P Acharjee, 'Thermal Efficiency Study of Conventional Pressure Stoves Equipped with Porous Radiant Inserts', International Energy Journal, 10, 247-254, 2009.
08	Buljit Buragohain, Pinakeswar Mahanta, Vijayanand S. Moholkar, 'Biomass gasification for decentralized power generation: The Indian perspective', Renewable and Sustainable Energy Reviews,14 (1), 73-92, 2010
09	Buljit Buragohain, Pinakeswar Mahanta, Vijayanand S. Moholkar, 'Thermodynamic optimization of biomass gasification for decentralized power generation and Fischere Tropsch synthesis', Journal of Energy, 35 (6), 2557-2579, 2010.

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10	Gouri Sankar Paul and Pratima Agarwal, 'Persistent photocurrent and decay studies in CdS nanorods thin films', Journal of Applied Physics, 106, 103, 2009.
11	Ranjit S. Patil, Manmohan Pandey and Pinakeswar Mahanta, 'Effect of Scale-up Upper Splash Region on Heat Transfer Characteristics of Circulating Fluidized Bed Risers', International Journal of Energy and Power Engineering, 224 (8), 1059-1068, 2010.
12	P. Mazumdar, A. Basu, A. Paul, C. Mahanta, L. Sahoo, 'Age and orientation of the cotyledonary leaf explants determine the efficiency of de novo plant regeneration and <i>Agrobacterium tumefaciens</i> mediated transformation in <i>Jatropha curcas L.</i> ', South African Journal of Botany, 76(2) 337-344, 2010
13	Lepakshi Barbora, Rupesh Singh, Nivedita Shrotri and Anil Verma, 'Synthesis and Characterization of Neodymium Oxide Modified Nafion Membrane for Direct Alcohol Fuel Cells', Journal of Material Chemistry and Chemical Physics, 122, 211–216, 2010.
14	B. Buragohain, P. Mahanta and V.S. Moholkar, 'Biomass Gasification for Decentralized Power Generation: The Indian Perspective', Renewable and Sustainable Energy Reviews, 14, 73 – 92, 2010
15	Ranjit S. Patil, Pinakeswar Mahanta and Manmohan Pandey, 'Effect of Scale-up on Heat Transfer Characteristics of Cyclone Separators of Circulating Fluidized Beds', International Energy Journal, 11 (3), 123-130, 2010.
16	B. Buragohain, P. Mahanta and V.S. Moholkar, 'Thermodynamic Optimization of Biomass Gasification for Decentralized Power Generation and Fischer-Tropsch Synthesis', Energy, 35, 2557 – 2579, 2010.
17	B. Buragohain, P. Mahanta and V.S. Moholkar, 'Investigations in Gasification of Biomass Mixtures Using Thermodynamic Equilibrium and Semi-equilibrium Models', International Journal of Energy and Environment, 2(3), 551-578, 2011.
18	B. Buragohain, P. Mahanta and V.S. Moholkar, 'Performance Correlations for Biomass Gasifiers Using Semi-equilibrium Non-stoichiometric Thermodynamic Models', International Journal of Energy Research, 36(5), 590-618, 2012.
19	Urmila Saxena, Madhuri Das, Seraj Ahmed, Lepakshi Barbora, Mala Borthakur, Anil Verma, Utpal Bora and Pranab Goswami, 'Multiwalled Carbon Nanotube-Based Enzyme Electrode for Total Cholesterol Estimation in Human Serum' Journal of Experimental Nanoscience', 6 (1), 84-95, 2010.
20	Lepakshi Barbora, Rupesh Singh, Nivedita Shrotri and Anil Verma, 'Synthesis and characterization of neodymium oxide modified nafion membrane for direct alcohol fuel cells', Materials Chemistry and Physics, 122, 211-216, 2010.

21	Ranjit S. Patil, Manmohan Pandey and Pinakeswar Mahanta, 'Effect of Scale-up on Heat Transfer Characteristics in Upper Splash Region of Circulating Fluidized Bed Risers', International Journal of Energy and Power Engineering, 04 (6), 9-15, 2010.
22	Ranjit S. Patil, Manmohan Pandey and Pinakeswar Mahanta, 'Parametric Studies and Effect of Scale-up on Wall-to-Bed Heat Transfer Characteristics of Circulating Fluidized Bed Risers', Experiemntal Thermal and Fluid Science, 35 (3) 485-495 (2010).
23	Ranjit S. Patil, Manmohan Pandey and Pinakeswar Mahanta, "Effect of Scale-up of Lower and Middle Splash Region on Heat Transfer Characteristics of Circulating Fluidized Bed Risers" Journal of Power and Energy, 224 (8), 1059-1068, 2010.
24	P. Mazumdar, A. Basu, A. Paul, C. Mahanta, L. Sahoo, 'Age and orientation of the cotyledonary leaf explants determine the efficiency of de novo plant regeneration and <i>Agrobacterium tumefaciens</i> mediated transformation in <i>Jatropha curcas L.</i> ', South African Journal of Botany, 76, 2: 337-344, 2010.
25	B.B. Sahoo, U.K. Saha and N. Sahoo, 'Determination of performance limits for a syngas–diesel fueled compression ignition engine by second law analysis, Energy, 36 (2), 760-769, 2011.
26	Preety Vatsyayan, Sandip Bordoloi, Pranab Goswami, 'Large catalase based bioelectrode for biosensor application, Biophysical Chemistry', 153, 36–42, 2010.
27	Nivedita Shrotri, Lepakshi Barbora, Anil Verma, 'Neodymium triflate modified nafion composite membrane for reduced alcohol permeability in direct alcohol fuel cell', International Journal of Hydrogen Energy, 1-7, 2011.
28	Gouri Sankar Paul and Pratima Agarwal, 'Structural and thermal studies on PbS nanocubes', Physica Status Solidi C7, 905, 2010.
29	Gouri Sankar Paul and Pratima Agarwal, 'Evolution of nanostructure with reaction time for ZnS synthesized by solvothermal process', Physica Status Solidi C7, 909, 2010.
30	B. B. Sahoo, U. K. Saha and N. Sahoo, 'Effect of Load Level on the Performance of a Dual Fuel Compression Ignition Engine Operating on Syngas Fuels With Varying H ₂ /CO Content, ASME Journal of Engineering for Gas Turbines and Power', 133(12), 122, 2011.
31	B. B. Sahoo, U. K. Saha and N. Sahoo, 'Theoretical Performance Limits for a Syngas–Diesel Fueled Compression Ignition Engine from 2nd Law Analysis', Energy, 36, 760–769, 2011.

32	R. S. Patil, M. Pandey and P. Mahanta 'Parametric studies and effect of scale up on wall-to-bed heat transfer characteristics of circulating fluidized bed risers', <i>Experimental Thermal and Fluid Science - International Journal of Experimental Heat Transfer, Thermodynamics, and Fluid Mechanics</i> , 35 (3), 485-494, 2011.
33	Buragohain, P. Mahanta and V.S. Moholkar 'Investigations in gasification of biomass mixtures using thermodynamic equilibrium and semi-equilibrium models' <i>International Journal of Energy and Environment</i> , 2 (3), 551 – 578, 2011.
34	A. Ranjan and V. S. Moholkar 'Comparative study of various pretreatment techniques for rice straw saccharification for the production of alcoholic biofuels', <i>Fuel</i> , 112, 567-571, 2013.
35	S. Khanna, A. Goyal and V. S. Moholkar 'Microbial conversion of glycerol: present status and future prospects', <i>Critical Reviews in Biotechnology</i> , 32(3), 235-262, 2011.
36	R. Patidar, S. Khanna, V. S. Moholkar 'Physical features of ultrasound assisted enzymatic degradation of recalcitrant organic pollutants', <i>Ultrasonics-Sonochemistry</i> , 19(1),104-118, 2012.
37	S. S. Mohapatra and P. Mahanta 'Experimental investigation of an indirect type of natural convection dryer for thin layer paddy drying', <i>International Journal of Mechanical Engineering Research and Development</i> , 1, 47-54, 2011.
38	S. Khanna, A. Goyal , V. S. Moholkar 'Production of n-butanol from biodiesel derived crude glycerol using <i>Clostridium pasteurianum</i> immobilized on amberlite', <i>Fuel</i> , 112, 557-561, 2011.
39	B. B. Sahoo, U. K. Saha and N. Sahoo 'diagnosing the effects of pilot fuel quality on exergy terms in a biogas run dual fuel diesel engine', <i>International Journal of Exergy</i> , 10 (1), 77 – 93, 2012.
40	B. B. Sahoo, Sahoo N and U. K. Saha 'Dual fuel performance studies of a small diesel engine using green fuels', <i>Applied Mechanics and Materials</i> , 110-116, 2101-2108, 2011.
41	B. B. Sahoo, U. K. Saha and N. Sahoo 'Effect of load level on the performance of a dual fuel compression ignition engine operating on syngas fuels with varying H ₂ /CO content', <i>ASME Journal of Engineering for Gas Turbines and Power</i> , 133, 122802-122814, 2011.
42	S. Khanna, S. Jaiswal, A. Goyal, and V.S. Moholkar 'Ultrasound enhanced bioconversion of glycerol by <i>Clostridium pasteurianum</i> : A mechanistic investigation', <i>Chemical Engineering Journal</i> , 200-202, 416-425, 2012

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45	M. Das and P. Goswami 'Direct electrochemistry of alcohol oxidase using multiwalled carbon nanotube as electroactive matrix for biosensor application', Bioelectrochemistry, 89, 19-25, 2013
46	P. Mazumdar, V.B. Borugadda, V.V. Goud, and L. Sahoo 'Physico-chemical characteristics of <i>Jatropha curcas</i> L. of north east india for exploration of biodiesel', Biomass and Bioenergy, 1-9, 2012.
47	P. Kalita, U. K. Saha, and P. Mahanta 'Parametric study on the hydrodynamics and heat transfer along the riser of a pressurized circulating fluidized bed unit', Experimental Thermal and Fluid Science, 44, 620-630, 2012
48	P. Kalita, U. K. Saha, and P. Mahanta 'An experimental investigation of hydrodynamics and heat transfer with biomass blending in a riser of a pressurized circulating fluidized bed unit', International Journal of Energy, 13 (2), 63-74, 2012
49	A. Ranjan, S. Khanna, and V.S. Moholkar 'Feasibility of rice straw as alternate substrate for biobutanol production', Applied Energy, 103, 32-38, 2013
50	R. Mayank, A. Ranjan, and V.S. Moholkar 'Mathematical models of ABE fermentation: review and analysis', Critical Reviews in Biotechnology, 1-29, 2012
51	R. Mayank, A. Ranjan, and V.S. Moholkar 'Economics of biobutanol: A Review', Research Journal of Pharmaceutical, Biological and Chemical Sciences, 4, 3, 2012
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53	P. Kalita, U.K. Saha, and P. Mahanta 'Effect of biomass blending on hydrodynamics and heat transfer behavior in a cold pressurized circulating fluidized bed unit', International Journal of Heat and Mass Transfer, 60, 531-541, 2013.

54	P. Kalita, M. Clifford, K. Kalita, P. Mahanta, and U.K. Saha 'Characterization and analysis of thermal response of rice husk for gasification applications', Journal of Renewable and Sustainable Energy, 5, 013-119, 2013.
55	H.A. Choudhury, and V.S. Moholkar 'An optimization study of fischer-tropsch synthesis using commercial cobalt catalyst', International Journal of Scientific Engineering and Technology, 2 (1), 31-39, 2013.
56	A. Ranjan, R. Mayank, and V.S. Moholkar 'Development of semi-defined rice straw-based medium for butanol production and its kinetic study', 3 Biotech,3(5), 353-364, 2013.
57	S. Khanna, S. Chakma, and V.S. Moholkar 'Phase diagrams for dual frequency sonic processors using organic liquid medium', Chemical Engineering Science, 100, 137-144, 2013.
58	S. Khanna, A. Goyal, and V.S. Moholkar, 'Mechanistic investigation of ultrasonic enhancement of glycerol bioconversion by immobilized <i>Clostridium pasteurianum</i> on silica support', Biotechnology and Bioengineering, 110(6), 1637-45, 2013.
59	G.S. Paul and P. Agarwal 'Evolution of SnS nanostructures-their structural thermal and transport studies', Materials Chemistry and Physics, 136, 673-679, 2012.
60	M.K. Bolla, H.A. Choudhury, V.S. Moholkar, 'Mechanistic features of ultrasound-assisted oxidative desulfurization of liquid fuels, Industrial and Engineering Chemistry Research, 51 (29), 9705-9712, 2012.
61	S. Singh, V.S. Moholkar, A. Goyal, 'Optimization of carboxymethylcellulase production from <i>Bacillus amyloliquefaciens</i> SS35', 3-Biotech, DOI 10.1007/s13205-013-0169-6.
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64	D. Sahu, P. Mishra, S. Edubilli, A. Verma, and S. Gumma, 'Hydrogen Adsorption on Zn-BDC, Cr-BDC, Ni-DABCO and Mg-DOBDC Metal Organic Frameworks', Journal of Chemical & Engineering Data, DOI : 10.1021/je400546d , 2013.

65	P. Kalita, P. Mahanta, and U.K. Saha, 'Some studies on wall-to-bed heat transfer in a pressurized circulating fluidized bed unit', <i>Procedia Engineering</i> , 56, 163-172, 2013.
66	S. Singh, V.S. Moholkar, A. Goyal, 'Isolation, identification, and characterization of a cellulolytic bacillus amyloliquefaciens strain SS35 from rhinoceros dung' <i>ISRN Microbiology</i> , 2013; 2013: 1–7, ID 728134.
67	H.A. Choudhury, and V.S. Moholkar, 'Synthesis and characterization of Fe–catalyst for Fischer – Tropsch synthesis using biosyngas', <i>International Journal of Scientific Engineering and Technology</i> , 2, 817–821, 2013.
68	R.S. Malani, S. Khanna, and V.S. Moholkar, 'Sonoenzymatic decolourization of an azo dye employing immobilized horse radish peroxidase (HRP): a mechanistic study', <i>Journal of Hazardous Materials</i> , 256–257, 90–97, 2013.
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70	H.A. Choudhury, and V.S. Moholkar, 'An optimization study of Fischer – Tropsch synthesis using commercial cobalt catalyst', <i>International Journal of Scientific Engineering and Technology</i> , 2, 31–39, 2013.
71	S. Khanna, A. Ranjan, A. Goyal, V.S. Moholkar, 'Medium optimization for mixed alcohols production by glycerol utilizing immobilized <i>Clostridium acetobutylicum</i> MTCC 116. <i>Chemical and Biochemical Engineering Quarterly</i> ', 27(3), 319–325, 2013.
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75	P.P. Goswami, H.A. Choudhury, S. Chakma, V.S. Moholkar, Sonochemical Synthesis and Characterization of Manganese Ferrite Nanoparticles. <i>Industrial and Engineering Chemistry Research</i> (2013). DOI: 10.1021/ie401919x

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01	P. Kalita, G. Nanibabu, K.P. Vivek, U.K. Saha, and P. Mahanta, 'Design and performance evaluation of a novel biomass feeding system', Journal of Scientific and Industrial Research, 72, 511 – 514, 2013.

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