## **LIST OF PUBLICATIONS**

OF

Akhilendra Kumar Pathak, Professor Department pf Petroleum Engineering Indian Institute of Technology (Indian School Of Mines), Dhanbad

F	Publications in International Seminar/ Conference Proceedings						
SI. No.	Author (s)	Year	Title	Journal	Vol. No.	Page No.	Publication in
1.	Ghosh, G.P. and Pathak, A.K	1981	"Study of Complex Formation of Phosphoric Acid with Fruit Juices, Tartaric and Citric Acid".	Journal National Academy of Sciences, Allahabad. India	Vol 51(A) II,1981.		Nat. Journals
2.	Ghosh, G.P. and Pathak, A.K	1983	"Study of Complex Formation of Phosphoric Acid with milk Eggs, Meat & Fish".	Journal National Academy of Sciences, Allahabad. India	Vol 53(A) III,1983		Nat. Journals
3.	Pathak, A.K	1984	"Study of Complex Formation of Phosphoric Acid with Fruit Juices"	Journal National Academy of Sciences, Allahabad. India	Vol 54(A) III,1984.		Nat. Journals
4.	Pandey, B.P., Pathak, A.K., Rajvanshi, A.K. & Goyal, K.L	1984	"Study of Surface Active Compounds in Sanand Field Crude Oil"	J. Indian Institute of Sciences Banglore.	Vol 65(A)	47-56,	Nat. Journals
5.	Pathak, A.K.	1985	"Surface Active Compounds and Their Effect in Crude Oil".	Urja,	Issue October 85	205- 207.	Nat. Journals
6.	Pandey,B.P., Pathak, A.K. and Rajvanshi, A.K	1985	"Study of Surface Active Compounds in Crude Oils"	Science Reporter	Issue August-85	231- 234	Nat. Journals
7.	Pathak, A.K	1985	"Study of Complex Formation of Phosphoric Acid with Pulse Protiens".	Journal National Academy of Sciences, Allahabad. India	Vol 55(A) III		Nat. Journals

8.	Dhar, N.R., Ghosh, G.P. and Pathak, A.K	1986	"Study of Complex Formation of Phosphoric Acid with Leafy and Other Vegetables".	Journal National Academy of Sciences, Allahabad. India	Vol 56(A) III,		Nat. Journals
9.	A K Pathak	1992	Geometrical Analysis of Directional Well Profiles	Urja Oil & Gas International	Vol 1 No 9	31-35	Int. Journals
10.	Sarkar,G.N., Bandopadhyay, Malay, Chatterjee, S.S. and Pathak,A.K	1995	"Role of Solvents in the Effluents From the Petroleum Refineries,	Environment and Development of Process Industries, Indian National Academy of Engineering,	Issue 1995	352- 358	Nat. Journals
11.	Pathak, A.K. & Kumar, T	1995	"Studies of Indigenous Crude Oil Emulsions and their Stability",	First International Petroleum Conference PETROTECH - 95	vol. III	217- 224	Int. conf. Proc.
12.	Pathak, A.K. and Kumar, T	1995	"Development of a computer software for Three Dimensional Monitoring of Directional Wells,"	First International Petroleum Conference PETROTECH - 95	Vol III	1 - 6	Int. conf. Proc.
13.	Pathak, A.K. and Kumar, T	1995	"Slant Hole Drilling: A better Drilling Technique for Larger Horizontal Targets,"	First International Petroleum Conference PETROTECH - 95	Vol III	237- 242	Int. conf. Proc.
14.	Bandopadhyay, M., Sarkar, G.N., Rawat, B.S. and Pathak, A.K.	1995	"Route to Environmental Management of Spent Caustic Ex Refineries and Recovery of Value Added Products,"	First International Petroleum Conference PETROTECH - 95	Proceedings	199- 207	Int.Conf. Proc.
15.	Pathak,A.K. and Kumar, T.	1996	"Slant Hole Drilling: A better Drilling Technique for Larger Horizontal Displacement,"	Drilling and World Journal	Vol 4	69-76	Int. Journals
16.	Pathak, A.K. and Kumar, T	1996	"Study of Interfacial Activity of Indigenous Crude Oils and Their Fractions"	Proceedings, National Conference on Colloid & Emulsion of Natural	Proceedings	81-96	Nat.Conf. Proc.

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		<b>!</b>		systems, at		ļ	
		١ ,		University of Tripura,	<b> </b>	ļ	
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17.	Pathak, A.K.,	1997	" Study of Pressure Area Isotherm of Indigenous Crude	Proceedings of	vol. III	379-	Int. conf. Proc.
	Kumar, T., and	١ ,	Oil Fractions"	Second International	<b> </b>	387	
i	Mishra, S.N	١ ,		Petroleum	<b> </b>	ļ	
		١ ,		Conference	<b> </b>	ļ	
		<u> </u>		PETROTECH - 97			
18.	Kumar, T.,	1997	"Effect of multivalent Metal ion on Wettability of Silica/	Proceedings of	vol. I	311 -	Int. conf. Proc.
	Ahmad, I &	١ ,	Oil/ Brine System"	Second International	<b> </b>	320	
	Pathak, A.K	١ ,		Petroleum	<b> </b>		
1		۱ ,		Conference		1	
<u> </u>		<u> </u>		PETROTECH - 97		<u> </u>	
19.	Pathak,A.K. and	1997	"Performance Prediction of Slanted Profiles Wells: A	Proceedings of	vol. I	45-55	Int. conf. Proc.
	Kumar, T	ļ ,	system Approach for Comparative Studies."	Second International			
		۱ ,		Petroleum		1	
		١ ,		Conference	ļ .	ļ	
L 1				PETROTECH – 97		<u> </u>	
20.	Udaybhanu, G.,	1998	"Fourier Transformation Infrared Spectroscopic Studies	Proceedings of	Proceedings	442-	Nat.Conf. Proc.
	Sarkar, A., Singh	١ ,	of Some Crude Oil Samples,"	National Seminar on		445	
	Choudhary, S.K.,	١ ,		Technological	ļ .	ļ	
	Mohanty, S. and	١ ,		Advances and	ļ .	ļ	
	Pathak, A.K	١ ,		Challenges in Oil &	ļ .	ļ	
				Gas Industry		<u> </u>	
21.	Pathak, A.K. and	2001	"Slanted Well Profiles: Abetter Means for Extended	CD Proceedings	Paper No.	1-7	Int. conf. Proc.
	Kumar,T	<u> </u>	Reach Drilling"	PETROTECH-2001	U118	<u>                                     </u>	
22.	Pathak, A.K. and	2001	"Environmental Impact Assessment (EIA)- An Overview,"	Souvenir World	Proceedings	3 - 8,	Nat.Conf. Proc.
	Kumar, T	١ ,		Environment Day-		'	
		١ ,		2001, Seminar on	ļ .	ļ	
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23.	Pathak, A.K. and Kumar, T	2002	"Studies on Interfacial Activity of Heavier Crude Oil Distillates and After Distillation Residue",	Oil Asia Journal	Issue September, 2002	73 -77	Int. Journals
24.	Pathak, A.K. and Kumar, T	2002	"Environmental Impact Assessment in Petroleum Sector: An Overview"	Oil Asia Journal	Issue September 2002	40 - 46	Int. Journals
25.	Pathak, A.K. and Kumar, T.	2002	"Studies on Interfacial Activities of Heavier Crude Distillates and After-Distillation Residue,"	Proc, IORS-2002, the ninth Annual India Oil & Gas Review Symposium, Mumbai	Proceedings	73-77	Nat.Conf. Proc.
26.	Pathak, A.K. and Kumar, T	2003	"Studies on Interfacial Adsorption Phenomenon in Heavier Distillates and After Distillation Residuum of Bombay High Crudes"	CD Proceedings PETROTECH-2003	Paper No. U126	1-7	Int. conf. Proc.
27.	Pathak, A.K. and Kumar, T	2003	"Techno Economical Evaluation of Slanted Well Drilling Technology and it's Application in Oil & Gas Field Development"	CD Proceedings PETROTECH-2003	Paper No. U127	1-7	Int. conf. Proc.
28.	Pathak, A.K. and Kumar, T	2003	"Three Dimensional Modelling for Placing of Horizontal Well Profiles in Thin Seam Reservoirs"	CD Proceedings PETROTECH-2003,	Paper No. U169	1-9	Int. conf. Proc.
29.	Pathak Dr Akhilendra Kumar & Prof. Tarkeshwer Kumar	2005	"Tiryak Margiya Koop – Disha Nirdeshit Bedhan Kshetra Me Ek Naya Aayam"	Raj Bhasha Sangoshthi organised in Hindi at ONGC Chennai	Proceedings	45 –54	Nat.Conf. Proc.
30.	Pathak, A.K. and Kumar T	2005	"A Comparativa Approach for Slanted Well Profiles and Conventional Well Profiles for Extended Reach Drilling"	MGMI Seminar on Minerla and Energy Resources of Eastern and Northeastern India	Proceedings	387 – 891	Nat.Conf. Proc.
31.	Kumar, T and Pathak, A.K	2008	"Blowout and Fire Disaster in Oil & Gas Fields: Case Studies"	19 <sup>th</sup> National Convention of Mining Engineers & National Seminar on Disaster in Mines	Proceedings	15-26	Nat.Conf. Proc.
32.	Mahto, Vikas and Pathak, A K	2009	."Safety and Health Management in Coal Liquefaction Processes"	Advances in Chemical Engineering,	Special Issue 2009	456- 459	Nat. Journals

				Macmillan Publishers India Limited			
33.	Keka Ojha, Neeraj Agnihotri, A K Pathak, A K Singh and Ajay Mandal	2009	"Coal Bed Methane: Study on Efficient Extraction from an Indian Coal Field"	Mineral Industry in the New Economy: Challenges and Opportunity,	Proceedings	143- 147	Nat.Conf. Proc.
34.	Guria, C., Pathak, A.K., and Kumar, T.	2010	"Treated fly ash: a drilling fluid."	Proc Int Conf on Advances in Drilling Technology, ICDT – 2010	Proceedings	141- 152,	Int. conf. Proc.
35.	Bibhas Karmakar, A.K.Pathak, Keka Ojha	2010	"Prospects of CBM as clean energy source of India and difficulties involved in Methane production"	Procedings National Seminar on Drilling & Drilling – An Update (D&DU – 2010)	Proceedings	141 – 146	Nat.Conf. Proc.
36.	Vikas Mahto, Pawan Kumar Kashyap, Upendra Sinsh Yadav, A.K.Pathak	2010	"Emerging Developments on Polycrysatalline Diamond Compact Bits for Hard and Highly Heterogeneous Reservoirs"	National Seminar on Drilling & Drilling – An Update (D&DU – 2010)	Proceedings	169 - 176	Nat.Conf. Proc.
37.	Chadan Gura & Akhilendra Kumar Pathak	2010	"A New Method of Estimating Shear Rates for Drilling Fluids Using Fann VG Meter"	National Seminar on Drilling & Drilling – An Update (D&DU – 2010)	Proceedings	269 - 284	Nat.Conf. Proc.
38.	Pathak, A.K., Ojha, Keka, Singh, A,K,, and Agarwal ,Ankit,	2010	"Evaluation of Fugitive Methane Emission factor for Oil and Gas in India"	National Conference cum Workshop on Geological and Technological Facets of CBM, Shale Gas, Energy Resources and CO <sub>2</sub> Sequestration	Proceedings		Nat.Conf. Proc.
39.	Keka Ojha, B Karmakar, A Mandal, A K Pathak	2011	"Coal Bed Methane in India: Difficulties and Prospects"	International Journal of Chemical Engineering and Applications,	Vol. 2 No. 4	256	Int. Journals

40.	Keka Ojha, B Karmakar, A Mandal, A K Pathak	2011	CBM and CO <sub>2</sub> Sequestration in India: Solution to India's Growing Energy Needs and Mitigation of Global Warming	Proceedings of International Conference on Chemistry and Chemical Processing.	IPCBEE Vol 10	75-79	Int. conf. Proc.
41.	A. K. Pathak and K. Ojha	2012	Estimation of Methane emission from Hydrocarbon Exploration and Production in India	World Academy of Science, Engineering and Technology	Vol. 64	1183- 1186	Int. Journals
42.	Chandan Guria & Akhilendra K. Pathak	2012	An improved generalized three-parameter cubic equation of state for pure fluids.	Journal of Petroleum Science and Engineering	96-97	79-92	Int. Journals
43.	Monoj Sharma, Chandan Guria, Ashis Sarkar & Akhilendra K Pathak	2012	Recycling of Waste Fly Ash: A Rheological Investigation.	Int J Sci Env Tech	Vol 1 No. 4	285- 301	Int. Journals
44.	Amit Saxena, R. Mude, A. K. Pathak, and Keka Ojha	2012	Physicochemical characterization of polymer-surfactant based aqueous system for foam based drilling fluid"	ICDT (2012) ISBN: 978-93-80689-13-5	Proceedings	87-92	Int. conf. Proc.
45.	V Mahto, M H Siddique, A K Pathak	2012	Application of high power laser in oil and gas well drilling: an overview	Proceedings of the National conference on Advance in Laser.	Proceedings		Nat.Conf. Proc.
46.	Keka Ojha, Ajay Mandal, Bibhas Karmakar, A. K. Pathak, A. K. Singh	2013	Studies on Estimation & prospective recovery of coal bed methane from Rangigunj Coalfield, India	Energy Sources, Part A: Recovery, Utilization, and Environmental Effects	35 (5)	426 – 437	Int. Journals
47.	Ritesh V Martis, Raghvendra Singh, K. Ankita, Akhilendra K Pathak & Chandan Guria	2013	Solubility of carbon dioxide using aqueous NPK 10:26:26 complex fertilizer culture medium and Spirulina platensis suspension	J Environmental Chemical Engineering.	1(4),	1245- 1251	Int. Journals

48.	B Karmakar, T Ghosh. K Ojha, A K Pathak, J Devraju	2013	Effect of chemical composition and petrography of coal for coal bed methane evaluation with special reference to in situ gas content.	10 <sup>th</sup> Biennial international conference and exposition, Kochi	Pn0 201	201- 205	Int. Journals
49.	K Ojha, A Mandal, B Karmakar, A K Pthak, A KSingh	2013	Studies on the estimation and prospective recovery of coal bed methane from Raniganj coalfield, India	Energy Sources, Part A: Recovery Utilization and Environmental Effects	35	426- 437	Int. Journals
50.	Chandan Guria, Kiran K. Goli & Akhilendra K Pathak	2014	Multi-objective Optimization of Oil Well Drilling Using Elitist Non-dominated Sorting Genetic Algorithm,	Petroleum Science	11:98 (1)	98-111	Int. Journals
51.	Atrayee Baruah, Geetanjali Chauhan, Keka Ojha, A K Pathak	2014	Phase Behavior and Thermodynamic and Rheological Properties of Single-(SDS) and Mixed-Surfactant (SDS+CAPB)-Based Fluids with 3-Methylbutan-1-ol as the Cosurfactant and Pine Oil as the Organic Phase	Industrial & Engineering Chemistry Research dx.doi.org/10.1021/ie 500987y.	53(51)	19765- 74	Int. Journals
52.	Saxena, A; Pathak, AK; Ojha, K;	2014	Optimization of Characteristic Properties of Foam-Based Drilling Fluids	Brazilian Journal of Petroleum and Gas ISSN1982-0593	Vol 8 No.2	57-71	Int. Journals
53.	Amit Saxena, A K Pathak, Keka Ojha	2014	Synergistic Effects of Ionic Characteristics of Surfactants on Aqueous Foam Stability, Gel Strength, and Rheology in the Presence of Neutral Polymer	Industrial & Engineering Chemistry Research	53(49)	19184- 19191	Int. Journals
54.	Saxena, A; Ojha, K;, Pathak, Akhilendra Kumar	2014	Underbalanced Drilling and Its Advancements: An Overview	Journal of Petroleum Engineering & Technology	Vol 4 Issue 2	37-51	Int. Journals
55.	C. Guria, K. K. Goli, A. K. Pathak	2014	Multi-objective Optimization of Oil Well Drilling Using Elitist Non-dominated Sorting Genetic Algorithm	Petroleum Science	11	98-111	Int. Journals
56.	Ankita Kumari, Anup Kumar, Akhilendra K. Pathak, Chandan Guria	2014	Carbon dioxide assisted Spirulina platensis cultivation using NPK-10:26:26 complex fertilizer in sintered disk chromatographic glass bubble column	Journal of CO <sub>2</sub> Utilization	8	49-59	Int. Journals

57.	Ankita Kumari, Vaishali Sharma, A. K. Pathak, C. Guria	2014	Cultivation of Spirulina platensis using NPK-10:26:26 complex fertilizer and simulated flue gas in sintered disk chromatographic glass bubble column	Journal of Environmental Chemical Engineering	2(3)	1859- 1869	Int. Journals
58.	B Hazra, A. K. Pathak, C. Guria	2014	Optimal synthesis of methyl ester of Sal oil (Shorea robusta) using ion-exchange resin catalyst	International Journal of Industrial Chemistry	5(3-4)	95-106	Int. Journals
59.	D. K. Rajak, A. K. Pathak, C. Guria	2014	Improved Determination of Apparent and Plastic Viscosity for Aqueous Solution of Drilling Fluid Additives	International Journal of Petroleum Technology	1	8-13	Int. Journals
60.	B Hajra, N Sultana, A K Pathak, C Guria	2015	Response surface methods and genetic algorithm assisted optimal synthesis of biodiesel from high free fatty acid sal oil (Shorea robusta) using ion-exchange resin at high temperature	Journal of Environmental Chemical Engineering	3(4)	2378- 2392	Int. Journals
61.	A Kumar, AK Pathak, C Guria	2015	NPK-10: 26: 26 complex fertilizer assisted optimal cultivation of Dunaliella tertiolecta using response surface methodology and genetic algorithm	Bioresource Technology	194	117- 129	Int. Journals
62.	M. S. Sisodia, D. K. Rajak, A. K. Pathak, C. Guria	2015	An improved estimation of shear rate for yield stress fluid using rotating coaxial cylinder Fann Viscometer	Journal of Petroleum Science and Engineering	125	247- 255	Int. Journals
63.	Saxena, Amit; Ojha, Keka; Pathak, AK;	2015	Development of an Empirical Model for Settling of Solids in Gelled Foams	Arabian Journal for Science and Engineering	40(6)	1757- 1776	Int. Journals
64.	Baruah, A. Baruah, A K Pathak, K Ojha	2015	Phase behaviour and thermodynamic properties of lamellar liquid crystal developed for viscoelastic surfactant based fracturing fluid	Chemical Engineering Science	131	146- 154	Int. Journals
65.	A Kumari, AK Pathak, C Guria	2015	Effect of light emitting diodes on the cultivation of Spirulina platensis using NPK-10: 26: 26 complex fertilizer	Phycological Research	63(4)	274- 283	Int. Journals
66.	A Kumari, AK Pathak, C Guria	2015	Cost-Effective Cultivation of Spirulina platensis Using NPK Fertilizer	Agricultural Research	4(3)	261- 271	Int. Journals
67.	Atrayee Baruah, Akhilendra K. Pathak, Keka Ojha	2015	Phase behaviour and thermodynamic properties of lamellar liquid crystal developed for viscoelastic surfactant based fracturing fluid	Chemical Engineering Science	131	146- 154	Int. Journals

68.	Atrayee Baruah, Akhilendra K. Pathak, and Keka Ojha	2015	Study on the Thermal Stability of Viscoelastic Surfactant- Based Fluids Bearing Lamellar Structures	Industrial & Engineering Chemistry Research	54(31)	7640- 7649	Int. Journals
69.	Atrayee Baruah, Akhilendra K. Pathak, and Keka Ojha	2016	Study on Rheology and Thermal Stability of Mixed (Nonionic–Anionic) Surfactant Based Fracturing Fluids	AIChE Journal	62(6)	2177- 2187	Int. Journals
70.	A Raj, Ď K Rajak, S Gautam, C Guria, A K Pathak	2016	Shear rate Estimation: A detailed Review	Offshore Technology Conference SPE	OTC-27180	1-10	Int. Journals
71.	B Hajra, M Kumar, AK Pathak, C Guria	2016	Surface tension and rheological behavior of sal oil methyl ester biodiesel and its blend with petrodiesel fuel	Fuel	166	130– 142	Int. Journals
72.	A Baruah, D S Shekhawat, A K Pathak, K Ojha	2016	Experimental investigation of rheological properties in Zwitterionic anionic mixed-surfactant based fracturing fluids	Journal of Petroleum Science and Engineering	146	340- 349	Int. Journals
73.	A Kumar, C Guria, G Chitres, A Chakraborty, A K Pathak	2016	Modelling of microalgal growth an dlipid production in Dunaliella tertiolecta using nitrogen-phosphorus-potassium fertilizer medium in sintered disk chromatographic glass	Bioresource technology	218	1021- 1036	Int. Journals
74.	D. K. Rajak, C. Guria, R. Ghosh, S. Agarwal, A. K. Pathak	2016	Alkali assisted dissolution of fly ash: A shrinking core model under finite solution volume condition	International Journal of Mineral Processing	155	106- 117	Int. Journals
75.	Amit Saxena, A.K. Pathak, Keka Ojha, Shivanjali Sharma	2017	Experimental and modelling hydraulic studies of foam drilling fluid flowing through vertical smooth pipes	Egyptian Journal of Petroleum	26(2)	279- 290	Int. Journals
76.	N. Sultana, A. Das, C.Guria, B. Hajra, G.	2017	Kinetics of bentonite nanoclay-catalyzed sal oil (Shorea robusta) transesterification with methanol	Chemical Engineering Research and	119	263– 285	Int. Journals

	Chitres, V.K. Saxena, A. K. Pathak			Design			
77.	Hajra, B., Sultana, N., Guria, C., Pathak A.K., & Saxena, V.K	2017	Liquid phase selective catalytic oxidation of oleic acid to azelaic acid using air by transition metal acetate bromide complex.	Journal of the American Oil Chemists' Society	94	1463– 1480.	Int. Journals
78.	Rajak, D.K., Raj, A., Guria, C., & Pathak, A. K.	2017	Grinding of Class-F fly ash using planetary ball mill: A simulation study to determine the breakage kinetics by direct-and back-calculation method	South African Journal of Chemical Engineering	24	135- 147	Int. Journals
79.	Kumar A., Guria, C. & Pathak, A. K.	2017	Potential CO <sub>2</sub> fixation and optimal Dunaliella tertiolecta cultivation: Influence of fertilizer, wavelength of lightemitting diodes, salinity and carbon supply strategy.	Journal of CO <sub>2</sub> Utilization	22	164- 177	Int. Journals
80.	A Baruah, K Ojha, A K Pathak	2017	Effect of Nano-particles, temperature and pressure on the Viscoelastic properties of surfactant based fracturing flud for high temperature conditions	SPE Oil and Gas India Conference and Exhibition 2017			Int. Conf Proc
81.	A Kumar, C Guria, A K Pathak	2018	Optimal cultivation towards enhanced algea-biomass and lipid production using Dunaliella terioleca for biofuel application and potential CO <sub>2</sub> bio-fixation: Effect of nitrogen	Energy	148	1069- 1085	Int. Journals
82.	M Srungavarapu, K K Patidar, A KPtahak, A Mandal	2018	Performance studies of water based drilling fluid for drilling through hydrate bearing sediments	Applied Clay Science	152	211- 220	Int. Journals
83.	S Gautam, C Guria, D K Rajak, A K Pathak	2018	Functionalization of fly ash for the substitution of bentonite in drilling fluid	Journal of Petroleum Science and Engineering	166	63-72	Int. Journals