

BIO-DATA (as on 5th June, 2018)

- 1. Name, Designation and Pay:** DR. G. P. KARMAKAR
Visiting Professor in Petroleum Engineering
- 2. Present address:** Department of Mining Engineering
Indian Institute of Technology, Kharagpur 721302, INDIA.
- 3. Permanent address:** C/O Shri S.Sadhukhan; Ichapur Debitola; P.O. – Ichapur
PIN - 743144; Dist. North 24 Parganas; West Bengal, INDIA.
- 4. e-mail:** gpkarmakar@mining.iitkgp.ernet.in; gpkarmakar@gmail.com
- 5. Telephone:** +91- 3222 281848(O); 91-9434219861(M); 91-9679284282(M).
- 6. Fax :** +91- 3222 282282.
- 7. Date of birth:** 27th day of May, 1956
- 8. Nationality:** Indian
- 9. Whether SC/ST:** No.
- 10. Education:**
 - Ph. D. :** Indian Institute of Technology, Kharagpur, India, 1994.
 - M. Tech. (Petroleum Engineering):** Indian Institute of Technology (Indian School of Mines), Dhanbad, India, 1998.
 - Post Graduation in Petroleum Refining and Petrochemical Industry:** Institute of Petroleum and Gas, Ploiesti, Romania, 1982.
- 11. Scholarships / Fellowships/Awards received:**
 - (i) **UNESCO Scholarship** for Post Graduate studies at Institute of Petroleum and Gas, Ploiesti, Romania, 1981-82;
 - (iii) **DAAD Fellowship** at Friedrich Schiller University, Jena, Germany, 2000-01;
 - (iv) **British Commonwealth Fellowship** at Imperial College, London, 2001-02;
 - (v) **DAAD Fellowship** at FachHochschule Lausitz, Senftenberg, Germany, 2006-07;
 - (vi) **Certificate of Outstanding Contribution in Reviewing** for the Journal of Petroleum Science and Engineering (Elsevier) 2017.
- 12. Scientific Visits to:** Belgium, Brazil, France, Germany, Mauritius, the Netherlands, Romania, Singapore, Spain, United Arab Emirates, United Kingdom and United States of America.
- 13. Number of publications: 73.**
- 14. Professional history:**
 - 16-04-84 to 26-11-85: Chemist in Geochemistry/Reservoir & Production Division, KDMIPE, ONGC, Dehradun, India.
 - 28-11-85 to 27-11-93: Lecturer in Petroleum Engineering, ISM, Dhanbad, India.
 - 28-11-93 to 02-08-99: Senior Lecturer in Petroleum Engineering, ISM, Dhanbad.

03-08-99 to 27-06-06: Assistant Professor in Petroleum Engineering, ISM, Dhanbad.
28-06-06 to 14-10-08: Associate Professor in Petroleum Engineering, ISM, Dhanbad.
15-10-08 to 10-12-09: Professor in Petroleum Engineering, RGIPT, Raebareli, India.
11-12-09 to 16-05-14: Professor in Petroleum Engineering, PDP, Gandhinagar, India.
07-12-10 to 06-06-12: Director-in-Charge, SPT, PDP, Gandhinagar, India.
19-05-14 to 18-05-2017: Total Chair Professor in Petroleum Engg, IIT Kharagpur, India.
19-05-17 onwards: Visiting Professor, Department of Mining Engg, IIT Kharagpur, India.

15. Areas of Research:

- (i) Polysaccharide grafted acrylamide copolymers for enhanced oil recovery operations.
- (ii) Polysaccharide grafted acrylamide copolymers for the flocculation of fine particles.
- (iii) Water shut off during oil production using oil soluble organically modified silicate compounds.
- (iv) Flow assurance during crude oil transportation through pipelines.

16. Ongoing Research Projects:

- (i) Effect of Pore Structure of Indian Gas Shales on its Methane and CO₂ Adsorption Behaviour (GIB). (Prof. Basanta Kumar Prusty as Principal Investigator, and Prof. S. K. Pal, and Prof. G. P. Karmakar, Dept of Mining Engineering, IIT Kharagpur, are the Co-Principal Investigators). Sponsored by KDMIPE, ONGC, Kaulagarh Road, Dehradun. (Cost: Rs. 108.56 lakhs).
- (ii) Development of 3D Geomechanical Model for Stability Analysis of Production Borewell (DBB). (Prof. Abhiram Kumar Verma as Principal Investigator, and Prof. Debasis Deb, and Prof. G. P. Karmakar, Dept of Mining Engineering, IIT Kharagpur, are the Co-Principal Investigators). Sponsored by Centre for Excellence in Well Logging Technology (CEWELL), ONGC, Vadodara. (Cost: Rs. 71.82 lakhs).

17. Research projects completed:

- i) One AICTE sponsored research project entitled "Enhanced Oil Recovery Using Grafted Polysaccharides" (1996-1999) (cost Rs.5.5 lakhs).
- ii) One DST sponsored research project entitled "Studies on Flow Behavior and Gel Characteristics on an Oil Based System" (2004-2007) (Cost Rs. 5.28 lakhs).
- iii) One GSPC sponsored research project titled "Permeability and Conductivity Analysis for Tight Gas Sandstone" (2010-2012) (Cost Rs.44.88 lakhs).

18. Research Guidance:

One Ph. D. student has completed, one Ph.D. student has been working at IIT Kharagpur and two more Ph.D. students have been working at University of Petroleum and Energy Studies, Dhradun.

Twelve M. Tech. Students (Regular course) have completed and two more have been working under my guidance for their M.Tech. Dissertation works. Till date, more than two hundred fifty B.Tech. students have worked under my guidance for their dissertation works.

19. Consultancy:

- (i) Consultant, Focus Energy Limited, 3rd Floor, Gopala Tower, 25 Rajendra Place, New Delhi - 110 008.
- (ii) Course Consultant; Define Training, Abu Dhabi, UAE.
- (iii) Course Consultant, Reliance Industries Limited, Mumbai, INDIA.
- (iv) Course Consultant, L & T, Mumbai, INDIA.

20. Other related information:

- 1) Member, Technical Editorial Committee, SPE Reservoir Engineering & Evaluation, Society of Petroleum Engineers, USA.
- 2) Member, Editorial Board, Research & Development in Material Science (RDMS), Crimson Publishers, USA.
- 3) Reviewer, SPE Reservoir Engineering & Evaluation, Society of Petroleum Engineers, USA.
- 4) Reviewer, ASTM-Books, American Society for Testing and Materials, USA.
- 5) Reviewer, Carbohydrate Polymers, Elsevier B V., USA.
- 6) Reviewer, Journal of Applied Polymer Science, John Wiley & Sons, Inc., USA.
- 7) Reviewer, Journal of Petroleum Science and Engineering, USA.
- 8) Reviewer, Canadian Journal of Chemical Engineering, Canada.
- 9) Reviewer, Journal of Energy and Fuels, USA.
- 10) Reviewer, Journal of Energy and Fuels, USA.
- 11) Reviewer, International Journal of Biological Macromolecules, USA.
- 12) Reviewer, Journal of Earth System Science, Springer (Published by the Indian Academy of Sciences) Bangalore, India.
- 13) Reviewer, Journal of the Geological Society of India, New Delhi, India.
- 14) Member, Expert Committee, National Board of Accreditation, New Delhi, India.

21. Membership of professional bodies:

- (i) Member, Society of Petroleum Engineers, USA
- (ii) Life Fellow Member, the Institution of Engineers, India
- (iii) Life Member, the Institute of Chemical Engineers, India
- (iv) Life Member, Mining, Geological and Metallurgical Institute of India
- (v) Life Member, Materials Research Society of India
- (vi) Life Member, Tribology Society of India
- (vii) Life Member, Indian Society for Technical Education

22. Best Few Publications:

- i. **Karmakar, G. P.**, *"Synthesis, characterization and flocculation characteristics of polysaccharide graft copolymers"*. Res Dev Material Sci. 1(4). RDMS. 000518. 2017.
- ii. **Karmakar, G.P.**, *"Oilfield Disaster Management"*, Journal of Petroleum Engineering and Technology, Vol.7, No.2, September 2017 pp: 21-28.
- iii. **Karmakar, G.P.**, *"Shale Gas: Present Status and Future Challenges"*, Drilling and Exploration World, Vol. 26, No.10, August 2017 pp: 36-41.
- iv. **Karmakar, G.P.**, *"Well testing under high pressure high temperature conditions"*, Drilling and Exploration World, Vol. 25, No.9, July 2016 pp: 76-80.
- v. **Karmakar, G.P.**, *"Carbon Dioxide Sequestration During Enhanced Oil Recovery: Operational and Economical Aspects"*, Journal of Indian Geophysical Union, Special Volume-1/2016 pp: 5-12. **IF 0.313; C 1**
- vi. Thander, B., Sircar, A. and **Karmakar, G. P.**, *"Hydrocarbon resource estimation: a stochastic approach"*. Journal of Petroleum Exploration and Production Technology, December 2015, Volume 5, Issue 4, pp 445-452. **IF 0.298; C 1**

- vii. Brahma, J., Sircar, A. and **Karmakar, G. P.**, "Hydrocarbon prospectivity in central part of Tripura, India using an integrated approach" Journal of Geography and Geology, Vol. 5, No. 3, 2013, pp116-134. **C 1**
- viii. Brahma, J., Sircar, A. and **Karmakar, G. P.**, "Pre-drill pore pressure prediction using seismic velocities data on flank and synclinal part of Atharamura anticline in the Eastern Tripura India", Journal of Petroleum Exploration and Production Technology, June 2013, Volume 3, Issue 2, pp 93–103. **IF 0.298; C 2**
- ix. Devi, K.L., Sircar, A. and **Karmakar, G.P.**, "Hydrocarbon potential evaluation of lower Cambay Shale and Olpad formation in Cambay Basin, India: a review", International Journal of Geology, Earth and Environmental Sciences Vol. 2 (3) September - December, 2012 pp.137-146.
- x. **Karmakar,G.P.** and Chakraborty, C., "Improved oil recovery using polymeric gelants: A review", Indian Journal of Chemical Technology, Vol.13, March,2006, pp162-167. **IF 0.61; C 10.**
- xi. Singh, R.P., Tripathy,T., **Karmakar,G.P.**, Rath, S.K., Karmakar,N.C., Pandey,S.R. Panda,P., Kannan,K., Jain,S.K. and Lan,N.T., "Novel biodegradable flocculants based on polysaccharides", Current Science, Vol. 78, No. 7, 10 April,2000 pp.798-803. **IF 0.833; C 123.**
- xii. Singh, R.P., **Karmakar, G.P.**, Rath, S.K., Karmakar, N.C., Pandey,S.R., Tripathy,T., Panda,P., Kannan,K., Jain,S.K. and Lan,N.T., "Biodegradable drag reducing agents and flocculants based on polysaccharides: Materials and applications", Polymer Engineering and Science, January 2000,Vol.40, No.1,pp. 46-60. **IF 1.37; C 158.**
- xiii. **Karmakar, G.P.** and Singh, R.P., "Flocculation studies using amylose grafted polyacrylamides", Colloids and Surfaces, A. Physicochemical and Engineering Aspects, 133, (1998), pp.119-124. **IF 2.572; C 40.**

23. Details of Teaching, Research and Other Activities:

A. Teaching:

Dr. Karmakar has been teaching the following subjects during the last twenty nine years to B.Tech and M.Tech. Petroleum Engineering students at ISM, Dhanbad, Rajiv Gandhi Institute of Petroleum Technology, Raiberily, School of Petroleum Technology, Pandit Deendayal Petroleum University, Gandhinagar and at Indian Institute of Technology, Kharagpur, India:

- 1) Transport Phenomena (M.Tech. Petroleum Engineering)
- 2) Artificial Lift Techniques -do-
- 3) Reservoir Engineering -do-
- 4) Well Testing Analysis -do-
- 5) Enhanced Oil Recovery -do-
- 6) Introduction to Reservoir Engineering (M.Tech. Petroleum Exploration)
- 7) Natural Gas Engineering (B.Tech. & M.Tech. Petroleum & Mining Engineering)
- 8) Introduction to Petroleum Engineering (B.Tech Petroleum Engineering)
- 9) Oil and Gas Well Testing and EOR (B.Tech. Petroleum, Mining, Mechanical & Chemical Engg., M.Tech. Geology & Geophysics)
- 10) Applied Petroleum Reservoir Engg.and Management (B.Tech Petroleum Engineering)
- 11) Surface Operations for Oil and Gas Production -do-
- 12) Petroleum Production Equipment Design -do-
- 13) Petroleum Refinery Engineering -do-
- 14) Petrochemical Engineering -do-
- 15) Petroleum Economics and Oilfield Management -do-

- 16) Petroleum Refining & Petrochemical Engineering -do-
- 17) Transportation and Marketing of Petroleum & its Products -do-
- 18) Process Heat Transfer -do-
- 19) Chemical Engineering Thermodynamics -do-
- 20) Elements of Petroleum Engineering (B.Tech./M.Tech. Mining Engineering)
- 21) Drilling Technology -do-
- 22) Reservoir Engg. Fundamentals (B.Tech. Mining & Chemical Engg., M.Tech. G & G)
- 23) Petroleum Engg Practicals (B.Tech. & M.Tech. Petroleum Engineering)

B. Specialisation:

- (i) Post-graduation in Petroleum Refining and Petrochemical Industry from the Institute of Petroleum and Gas, Ploiesti, Romania (1981-82). Dissertation topic: "Secondary Recovery of Oil Using Surfactants". Thesis Supervisor: Prof. I. Popescu, Institute of Petroleum and Gas, Ploiesti, Romania.
- (ii) M.Tech. in Petroleum Engineering, Indian Institute of Technology (Indian School of Mines), Dhanbad (1999). Dissertation topic: "Polysaccharide Based Graft Copolymers for Enhanced Oil Recovery Operations". Thesis Supervisor: Prof. T. Kumar, Indian Institute of Technology (Indian School of Mines), Dhanbad.
- (iii) Ph.D. (Engineering) from Indian Institute of Technology, Kharagpur (1994).
Ph.D. topic: "Flocculation and Rheological Properties of Grafted Polysaccharides".
Thesis Supervisor: Prof R P Singh, Materials Science Centre, IIT, Kharagpur.

C. Research Experience:

(a) Research guidance:

- i) One Ph.D. student has been working with institute scholarship at IIT Kharagpur on "Flocculation and Rheological Behavior of Oilfield Drilling Mud using Polymers" since 10-07-2014 under my guidance.
- ii) One Ph. D. student has completed his research work under my guidance and submitted his thesis titled "Study of Pipeline Pigging Operations During Multiphase Flow through an Innovative Experimental Bye pass Pig Model" at University of Petroleum and Energy Studies, Dehradun in December, 2015.
- iii) Two more Ph. D. students have been working under my guidance at University of Petroleum and Energy Studies, Dehradun, India.
- iii) Twelve M. Tech. Students (Regular course) have completed their M.Tech. dissertation under my guidance. Till date, more than two hundred fifty B.Tech. Students had worked with me for their dissertation works.
- iv) One Senior Process Engineer from Gujarat Refinery, Indian Oil Corporation Ltd has completed his M.Tech. (by research) degree in Petroleum Engineering under my supervision on "Solid Waste Management in Petroleum Refineries".

(b) Post Doctoral research carried out:

- (i) At Friedrich-Schiller University, Jena, Germany with Prof. T.Hainze on "Water soluble polymers for flocculation studies" during the year 2000-01.

- (ii) At Imperial College, London with Prof. R.W.Zimmerman on “Water shut off using polymers during oil production” during the year 2001-02.
- (iii) At FachHochschule Lausitz, Senftenberg, Germany with Prof. Hans-Werner Bewersdorff on “Flow behavior of water soluble polymers” during the year 2006-07.

(c)Major areas of research:

- (i) Oil soluble organically modified silicates for water shut off during oil production.
- (ii) Polysaccharide grafted acrylamide copolymers for enhanced oil recovery operations.
- (iii) Polysaccharide grafted acrylamide copolymers for the flocculation of fine particles and industrial effluents.
- (iv) Flow assurance during crude oil transportation through pipelines.
- (v) Shale gas exploration and exploitation.

D. Administrative Responsibilities carried out:

- (i) **Member, Board of Studies**, Rajasthan Technical University, Kota, Rajasthan (2011-12 onwards).
- (ii) **Member, Board of Studies**, Maharashtra Institute of Technology, Pune, Maharashtra (2017-18 onwards).
- (iii) **Director-in-Charge, School of Petroleum Technology**, Pandit Deendayal Petroleum University, Gandhinagar (07-12-10 to 06-06-12).
- (iv) Member, Academic Council, Pandit Deendayal Petroleum University, Gandhinagar (15-12-09 to 16-05-14).
- (v) Coordinator, Postgraduate Studies, Pandit Deendayal Petroleum University, Gandhinagar (15-12-09 to 16-05-14).
- (vi) Worked as Professor-in-Charge, Training & Placement at School of Petroleum Technology, Pandit Deendayal Petroleum University, Gandhinagar from 7th July, 2010 to March, 2012.
- (vii) Worked as Officer-in Charge, Training & Placement, ISM, Dhanbad from 21st March 2005 to 20th September 2006.

E. Other Activities:

- 1) **Member, Technical Editorial Committee**, SPE Reservoir Engineering & Evaluation, Society of Petroleum Engineers, USA.
- 2) **Reviewer**, SPE Reservoir Engineering & Evaluation, Society of Petroleum Engineers, USA.
- 3) **Reviewer**, ASTM-Books, American Society for Testing and Materials, USA.
- 4) **Reviewer**, Carbohydrate Polymers, Elsevier B V., USA.
- 5) **Reviewer**, Journal of Applied Polymer Science, John Wiley & Sons, Inc., USA.
- 6) **Reviewer**, Journal of Petroleum Science and Engineering, USA.
- 7) **Reviewer**, Canadian Journal of Chemical Engineering, Canada.
- 8) **Reviewer**, Journal of Energy and Fuels, USA.
- 9) **Reviewer**, Journal of Energy and Fuels, USA.
- 10) **Reviewer**, International Journal of Biological Macromolecules, USA.
- 11) **Reviewer**, Journal of Indian Geological Society, New Delhi, India.
- 12) **Member**, Expert Committee, National Board of Accreditation, New Delhi, India.

- 13) **Independently conducted one week special course on “Advanced Reservoir Engineering & Reservoir Management” during 9-13 November, 2008 for ADCO executives at Abu Dhabi, UAE.**
- 14) **Independently conducted three days special course on “Reservoir Engineering for non-Reservoir Engineering Executives” during 16-18 September, 2010 for RIL executives at Mumbai, India.**
- 15) **Conducted and delivered lectures on a Short Course on “Young Hydrocarbon Professionals Scheme” For L & T Executives during 28TH March to 4th May, 2011 at School of Petroleum Technology, PDPU, Gandhinagar.**
- 16) **Delivered an invited talk on “ Carbon Dioxide Sequestration During Enhanced Oil Recovery: Operational and Economical Aspects:” on 13th September, 2017 at MI India Workshop, International Centre for Genetic Engineering & Biotechnology, New Delhi, India.**
- 17) **Delivered Key Note Address on “Oilfield Disaster Management” in International Conference on Challenges and Prospects of Petroleum Production and Processing Industries during 12th to 14th January, 2017 at IIT (ISM), Dhanbad, India.**
- 18) **Delivered an invited talk on “Recent Trends in Petroleum Industry” on 2nd May, 2016 at Rajiv Gandhi Institute of Petroleum Technology, Raebareli, India.**
- 19) **Examiner, ME (Petroleum Engineering), University of Pune, Maharashtra, India.**
- 20) **Referee of Indian Journal of Chemical Technology, National Institute of Science Communication (CSIR), New Delhi, India.**
- 21) **Inaugurated Department of Petroleum Engineering at Chandigarh University, Chandigarh on 14th May, 2013.**
- 22) **Member, Technical Advisory Committee, for Development of Fuel Station, Gujarat International Finance Tec-City, Gandhinagar, Gujarat (April 5, 2013).**
- 23) **Expert, Selection Board for the Recruitment of Faculty Members, Rajasthan Technical University, Kota, Rajasthan.**
- 24) **Member, International Advisory Committee, World PetroCoal Congress, New Delhi.**
- 25) **Examiner, Ph.D. thesis, University of Burdwan, West Bengal, University of Petroleum & Energy Studies, Dehradun, Uttarakhand, and Dibrugarh University, Assam, India.**
- 26) **Evaluator for Prize/Award, National Research Development Council, DSIR, Ministry of Science & Technology, New Delhi (2012).**
- 27) **Worked as a Judge in one of the Poster Sessions in CHEMCON 2018 during at 70th Annual Session of Indian Institute of Chemical Engineers, 27-30 December, 2017 at Haldia Institute of Technology, Haldia, India.**
- 28) **Chaired a Technical Session in CHEMCON 2015 held during 27th to 30th December, 2015 at Indian Institute of Technology, Guwahati, India.**
- 29) **Subject Expert (March, 2013), Faculty Selection for Petroleum Engineering, Rajasthan Technical University, Kota, Rajasthan.**
- 30) **Member, Publication Committee for the Journal of the Institute of Chemical Engineers, India, for the year 2000-2001.**
- 31) **Project Guide for Institute of Engineers (more than nine students of AMIE(I)), India.**
- 32) **Assessor, National Research Development Corporation(CSIR), New Delhi(16-05-2012 & 20-06-2012)**
- 33) **Team Member, Chevron Visit Team for MSAT (27-04-2012), Chennai, India.**

- 34) Member, Academic Development Council, Ganpat University, Ganpat Vidyanagar, Mehsana, Gujarat.
- 35) Examiner (April, 2013, April 2014) for B.Tech. Petroleum Engineering, Rajasthan Technical University, Kota, Rajasthan, India.
- 36) Paper Setter and Examiner (April, 2013) for B.Tech. Petroleum Engineering, Jawaharlal Nehru Technical University, Kakinada, India.
- 37) Paper Setter and Examiner for B.Tech. and M.Tech. Petroleum Engineering, Indian School of Mines, Dhanbad, India.
- 38) Worked as Associate Dean (Students Affairs) 2009-10 at RGIPT, Raebareli
- 39) Worked as M.Tech. Coordinator, Department of Petroleum Engineering from April to October 2008. (Earlier also worked for the same position from June 2003 to April 2005).
- 40) Member, Research Council 2008-09 at ISM, Dhanbad.
- 41) Working as Faculty Sponsor, ISM Students Chapter of Society of Petroleum Engineers, USA, and organized "Indian Sub Regional Paper Contest" for SPE Student Chapter at ISM Dhanbad on 5th October 2007 at ISMU, Dhanbad.
- 42) Working as Faculty Advisor, ISM Students Chapter of the Institution of Engineers, India.
- 43) Ex-Member, Academic Council, ISM, Dhanbad.
- 44) Ex-Hostel Warden, ISM, Dhanbad
- 45) Ex-Joint Secretary, ISM Teachers Association.
- 46) Worked as a Resource Person at Institute of Petroleum Management, Pandit Deendayal Petroleum University, Gandhinagar, Ahmedabad during May, 2008.
- 47) Invited for Academic Discussion / Curriculum Development at Institute of Petroleum Technology Gandhinagar, Pandit Deendayal Petroleum University, Gandhinagar, Ahmedabad during 11-12 February 2008.
- 48) Invited for Academic Discussion / Curriculum Development at University of Petroleum and Energy Studies, Dehradun during 19-20 January 2008.
- 49) Examiner, Chemical Engineering, University of Burdwan, W.Bengal.
- 50) Delivered an **Invited Talk** on "Enhanced Oil Recovery and Role of Polymers" at ABB-IIT Guwahati Workshop on EOR, Integrated Operations, Safety, during 19-20 February, 2015, Guwahati, Assam, India.
- 51) Delivered an **Invited Talk** as Distinguished Speaker for Conference on Oil and Gas Exploration & Production Industry in India: A Swift Move from Easy Oil Era to Hard Oil Era at Diligentia, on September 26, 2015, New Delhi, India.
- 52) Delivered **Key Note Address** on "Shale: An Alternate Energy Resource for India" during Fourth World PetroCoal Congress, 15th to 17th February, 2014 at Convention Centre-NDCC Parliament Street, New Delhi, India.
- 53) Delivered **Key Note Address** on "Production of hydrogen from coal and carbon dioxide sequestration" during Third World PetroCoal Congress, 15th to 17th February, 2013 at Convention Centre-NDCC Parliament Street, New Delhi, India.
- 54) Delivered **Key Note Address** on "Flow Assurance in Oil and Gas Industries: Present Status and Future Opportunities" in ESMOC during 9th to 11th December, 2013 at NIT Durgapur India.
- 55) Delivered **Key Note Addresses** at different National Seminars/Symposiums in India which includes at Gas Authority of India Limited, New Delhi, Indian Institute of Technology, Kharagpur and Engineering Council of India, New Delhi during 2008-09.

- 56) Delivered **Invited Talk** on “Health, Safety and Environment Aspects of Carbon dioxide Sequestration” during Global HSE Conference, 26-27 September, 2014 organized by Cairn India, New Delhi, India.
- 57) Delivered **Invited Talk** on “Shale- An Alternate Energy Resource” during Second World PetroCoal Congress , 15th to 17th February, 2012 at Convention Centre-NDCC Parliament Street, New Delhi, India.
- 58) Delivered **Invited Talk** on “Environmental Challenges during Shale Gas Exploration and Exploitation Activities” at Shale Gas India 2011, organized by Drilling and Exploration World Journal, Nov 20, 2011, New Delhi.
- 59) Delivered **Invited Talk** at National Seminar on “Recent Advances in Chemical Engineering Operation Processes in Chemical and Allied Industries during 5-6 February, 2008 ” at Institute of Technology, Bilaspur - 495 009, India.
- 60) Delivered **Special Lectures** to the participants on “ Flow Assurance in Oil Industries” to the participants in the Short Term Course on ‘Emerging Trends in Upstream and Downstream Operations of Petroleum Industries’, December 18, 2014 at NIT Durgapur - 713209, India.
- 61) Delivered **Special Lectures** to the participants on “Hydrocarbon Engineering and Management” from various institutes at Dr. B.R.Ambedkar NITJalandhar, November 24, 2007.
- 62) Delivered **Special Lectures** to the students of the Department of Mining Engineering and the Department of Geology and Geophysics, IIT, Kaharagpur, during March 2-3, 2005 and April 4-6, 2006.
- 63) Delivered **Special Lectures** to Senior Executives of Ankleshwar Project of ONGC on “Grafted polysaccharides-synthesis and applications in oil industry”, Jan. 22-23, 1997.
- 64) Delivering **Special Lectures** to Workmen Inspectors of ONGC at Institute of Miners and Metal makers Education, at Dhanbad and at Udaipur regularly since 1999; the latest was during Jan 19-21, 2009 at Udaipur.
- 65) Delivered **Special Lectures** to P.E. for ONGC executives at CMRI, Dhanbad on “Oil Mines Regulations”.
- 66) With PCRA, Calcutta, organized “National Seminar on Energy Conservation in Mining Industry” Dec. 8, 1995, at ISM, Dhanbad.

24. Complete List of Publications:

A. Published in international journals/books:

- 1) **Karmakar, G. P.**, “*Synthesis, characterization and flocculation characteristics of polysaccharide graft copolymers*”. Res Dev Material Sci. 1(4). RDMS. 000518. 2017.
- 2) Thander, B., Sircar, A. and **Karmakar, G. P.**, “*Hydrocarbon resource estimation: a stochastic approach*”. Journal of Petroleum Exploration and Production Technology, DOI 10.1007/s13202-014-0144-8, 6th November, 2014.
- 3) Thander, B., Sircar, A. and **Karmakar, G. P.**, “*Hydrocarbon Resource Estimation: Application of Monte Carlo Simulation*”. International Journal of Latest Technology in Engineering, Management & Applied Science, Vol.3, No.4, 2014, pp30-47.
- 4) Brahma, J., Sircar, A. and **Karmakar, G. P.**, “*Hydrocarbon prospectivity in central part of Tripura, India using an integrated approach*” Journal of Geography and Geology, Vol. 5, No. 3, 2013, pp116-134.

- 5) Brahma, J., Sircar, A. and **Karmakar, G. P.**, "Pre-drill pore pressure prediction using seismic velocities data on flank and synclinal part of Atharamura anticline in the Eastern Tripura India", Journal of Petroleum Exploration and Production Technology, DOI 10.1007/s13202-013-0055-0, 24th March, 2013.
- 6) Devi, K.L., Sircar, A. and **Karmakar, G.P.**, "Hydrocarbon potential evaluation of lower Cambay Shale and Olpad formation in Cambay Basin, India: a review", International Journal of Geology, Earth and Environmental Sciences Vol. 2 (3) September - December, 2012 pp.137-146.
- 7) Singh, R.P., **Karmakar, G.P.**, Rath, S.K., Karmakar, N.C., Pandey, S.R., Tripathy, T., Panda, P., Kannan, K., Jain, S.K. and Lan, N.T., "Biodegradable drag reducing agents and flocculants based on polysaccharides: Materials and applications", Polymer Engineering and Science, January 2000, Vol.40, No.1, pp. 46-60.
- 8) **Karmakar, G.P.** and Singh, R.P., "Flocculation studies using amylose grafted polyacrylamides", Colloids and Surfaces, A. Physicochemical and Engineering Aspects, 133, (1998), pp.119-124.
- 9) **Karmakar, G.P.** and Guha, D., "Adsorption equilibria of surfactant adsorption on selected core samples", Jorn.Com.Esp.Deterg. 20/Anexo (1989) pp. 49-61.
- 10) Nain, K., **Karmakar, G.P.** and Kumar, R., "Aromatic hydrocarbon type distribution in the oils of Cambay Basin", Petroleum Geochemistry and Exploration in the Afro-Asian Region, Kumar et.al. (Eds.), 1987, Balkema, Rotterdam, ISBN 90 6191 791 3, pp.475-478.
- 11) **Karmakar, G.P.** "International Crude oil markets and their impact on Indian oil industries ", **Contemporary Issues in Energy Sector**, Neeraj Anand. (Ed.), April 2009, Technology Publications, Dehradun, India, pp.25-47.
- 12) **Karmakar, G.P.** "Environmental challenges, mitigation, control and containment of pollutants for the oil and gas industry", **Guidance for Solving Environmental Challenges of Mining, Construction, Processing and Oil and Gas Field Projects**, J. Bhattacharya (Ed.), August, 2009, Wide Publishing, Kolkata, India, pp.115-126.

B. Published in national journals:

- 1) **Karmakar, G.P.**, "Oilfield Disaster Management", Journal of Petroleum Engineering and Technology, Vol.7, No.2, September 2017 pp: 21-28.
- 2) **Karmakar, G.P.**, "Shale Gas: Present Status and Future Challenges", Drilling and Exploration World, Vol. 26, No.10, August 2017 pp: 36-41.
- 3) **Karmakar, G.P.**, "Well testing under high pressure high temperature conditions", Drilling and Exploration World, Vol. 25, No.9, July 2016 pp: 76-70.
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