

YANG Shenglai

Ph.D., Professor

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Education

Ph.D., Safety Engineering, China University of Mining and Technology (China), 1996

M.S., Safety Engineering, University of Newcastle Upon Tyne (U.K), 1985

B.S., Mining Engineering, Taiyuan University of Technology (China), 1982

Post Doctor, Petroleum Engineering, China University of petroleum, Beijing (China)

Research Areas and Interests

Petro-Physics, Phase behavior, physics of flow through porous media,
Percolation features of oil and gas system;

Reservoir Engineering;

Gas Production Engineering;

EOR especially on gas flooding, CO₂ and natural gas flooding.

Teaching

Petro-Physics; Advanced Petro-Physics;

Gas Reservoir Eng.; Advanced Gas Reservoir Eng.;

Petroleum Engineering

Professional Experiences

2004-now, Professor, Supervisor of Ph.D. Candidates, China University of Petroleum, Beijing

1998-2004, Vice Professor, Master Supervisor, China University of Petroleum, Beijing

1996-1998, Post Doctor study, China University of petroleum, Beijing

1994-1995, Visiting Scholar, West Virginia State University, U.S.

1987-1994, Lecturer, Vice Professor, Taiyuan University of Technology

1982-1984, Assistant lecturer, Taiyuan University of Technology

Other Appointments

Assessment expert of the State science and technology prizes (SSTPA);

Assessment expert of 6 provincial and ministerial-level science and technology prizes (Ministry of Education, Shanghai, Shandong, et al);

Assessment expert of Natural Science Foundation of China (NSFC) for Outstanding Young Teachers;

Assessment expert of State Council Academic Degree & National Bilingual Teaching Demonstration Course Construction Project;

Reviewer of 11 Journals such as Petroleum Science, Acta Petrolei Sinica, Journal of China University of Petroleum, et al

Other Professional Affiliations

SPE Member

Member of Chinese Petroleum Society

Member of Key Lab of Petrophysics and Phase Behavior of CNPC

Honors and Awards

★SPE Faculty Innovative Teaching Award, 2013

★The second prize on research work by Science and Technology Progress Award of Shanxi Province, 2011

★ The First prize on research work by China Petroleum and Chemical Industry Association, 2010

★ National Excellent University Course (Petrophysics, team leader), 2010

★ Outstanding teacher of CUPB in 2008-2010

★ Excellent University Course of Beijing (Petrophysics, team leader), 2009

★ Excellent Textbook prize by Petroleum Industry Press and China Petroleum and Chemical Industry Association, 2009

★ Excellent Textbook for University Education of Beijing City, 2006

★ Excellent Course of CUPB in 2006

★ National Planned Textbook for Tenth Five-year Plan, 2005

Selected Publications

1. Yang Shenglai. Fundamentals of Petrophysics[M], Berlin, Germany: Springer, 2017
2. Yang Shenglai. Fundamentals of Petrophysics[M], Beijing: Petroleum Industry Press, 2011
3. Yang Shenglai. Petrophysics[M], Dongying, China University of petroleum Press, 2010
4. Yang Shenglai, Wei Junzhi. Petrophysics [M], Beijing, Petroleum Industry Press, 2004
5. S. L. Yang, H. Chen, D. Z. Hang, H. LU. X. Zhang and S. B. Lv. Mechanism of Produced Gas Re-injection during CO₂ Flooding by Chromatographic Analysis[J]. Journal of dispersion science and technology. 2013, 34(3): 342-346.
6. Shenglai YANG, Rong SUN, Dazhen HANG, Ming WU, Hui DENG, Li CHEN. Study on the Extraction Process During CO₂ Flooding in Oil Reservoir And its Effects on Crude Oil Properties[C]. Proceedings of the 5Th International conference on Separation Science and Technology, Beijing ,2007
7. Yang, Sheng-lai; Hang, Da-zhen; Sun, Rong; Lü, Wen-feng; Wu, Ming; Deng, Hui. Extraction for crude oil and its effect on crude oil viscosity [J]. Journal of China University of Petroleum, 2009,33 (4) : 85-88, Language: Chinese
8. Yang, Sheng-Lai, Hang, Da-Zhen; Sun, Rong; Lü, Wen-Feng; Wu, Ming; Deng, Hui. CO₂ extraction for crude oil and its effect on crude oil viscosity. Journal of China University of Petroleum, 2009, 33(4): 85-88, Language: Chinese
9. S. L. Yang , H. Chen , D. Z. Hang , H. Lu , X. Zhang & S. B. Lv (2013): Mechanism of Produced Gas Reinjection During CO₂ Flooding by Chromatographic Analysis, Journal of Dispersion Science and Technology, 2013,34(3), 342-346

10. CHEN, S.L. YANG, D.H. YU, F.F. LI, and X. ZHANG. Non-equilibrium Features of N₂ and Oil System. *Journal of Dispersion Science and Technology*. 2013, 34(3): 411-416.
11. H.CHEN, S.L.YANG, S.S.REN, D.H.YU, H. LU, F.F. LI, and X.ZHANG. Crude Oil Displacement Efficiency of Produced Gas Re-injection. *International Journal of Green Energy*. 2013, 10(6): 566-573.
12. Hao Chen, Shenglai Yang, Fangfang Li, Sanbo Lv, and Zhilin Wang. Extractive Capacity of CO₂ in Oil Saturated Porous Media. 2012 International Conference on Energy and Environmental Protection & Advanced Materials Research, 2012, 524-527, pp 1807-1810.
13. F.F.LI, S.L.Yang, D.D.YIN, H.CHEN, H.LU and X.ZHANG. Estimation of CO₂-oil phase equilibrium and CO₂ storage Capacity in Jilin oil field. *Advanced Materials Research & 2012 International Conference on Energy and Environmental Protection*, 524-527 pp 1802-1806;
14. Ren, Shuang-Shuang; Yang, Sheng-Lai; Hang, Da-Zhen. Laboratory evaluation of effects of impure CO₂ on MMP and displacement efficiency [J] . *Journal of China University of Mining and Technology*, 2010,39 (2): 249-253, Language: Chinese
15. Ren Shuangshuang, Yang Shenglai.Z-factor calculation method and application of the gas well richly containing CO₂, *Journal of shanxi university of science & technology*,2010,28(1):17-22.
16. Ren Shuangshuang, Yang Shenglai, Shen Fei. Prediction of minimum miscibility pressure with BP neural network [J. *Fault-Block Oil & Gas Field*, 2010, 17 (2) : 216-218.
17. 39.Xing ZHANG, Shenglai YANG, Guiyun Li, Wuguang LI, Hao CHEN, China University of Petroleum(Beijing), Compressibility Factor of Gas with High Content of CO₂ in Changshen Gas Reservoir., *Proceedings in 2011 international conference on computational and information sciences*, Chengdu, china, 21-23october.pp543-545 EI retrieved
18. Li, Fangfang; Yang, Shenglai; Yin, Dandan; Chen, Hao; Lu, Hui; Zhang, Xing. Estimation of CO₂-oil phase equilibrium and CO₂ storage capacity in Jilin oil field. *Advanced Materials Research*, v 524-527, p 1802-1806, 2012, *Natural Resources and Sustainable Development II*
19. S. L. Yang , H. Chen , D. Z. Hang , H. Lu , X. Zhang & S. B. Lv: Mechanism of Produced Gas Reinjection During CO₂ Flooding by Chromatographic Analysis, *Journal of Dispersion Science and Technology*, 2013,34:3, 342-346
20. H. Chen , S. L. Yang , S. S. Ren , D. H. Yu , H. Lu , F. F. Li & X. Zhang (2013): Crude Oil Displacement Efficiency of Produced Gas Re-injection, *International Journal of Green Energy*, 10:6, 566-573
21. H. CHEN, S.L. YANG, D.H. YU, F.F. LI, and X. ZHANG. Non-equilibrium Features of N₂ and Oil System. *Journal of Dispersion Science and Technology*.2013, 34 (3): 411-416 SCI
22. H. CHEN, S.L. YANG, F.F. LI, Z.L.WANG, S.B.LV and A.A.ZHENG. Effects of CO₂ Injection on Phase Behavior of Crude Oil. *Journal of dispersion science and technology*. 2013, 34(6):847-852. SCI
23. Hao Chen, Shenglai Yang, Kangning Huan, et al. Experimental Study on Monitoring CO₂ Sequestration by Conjoint Analysis of the P-wave Velocity and Amplitude. *Environmental Science & Technology* 2013, 47 (17) :10071-10077.
24. F. F. Li, S. L. Yang, H. Chen, X. Zhang D. D. Yin, L. P. He, Z. Wang, An improved method to study CO₂-oil relative permeability under miscible conditions, *J Petrol Explor Prod Technol* DOI 10.1007/s13202-014-0122-
25. Fangfang Li, Shenglai Yang, Hao Chen, Xing Zhang, Xiangrong Nie, Jingchen Ding and Aiai Zheng, Long core physical simulation for CO₂ flooding in low permeability reservoir, *Int. J. Oil, Gas and Coal Technology*, Vol. 8, No. 3, 2014, 251

26. Hu Wei, Yang Shenglai, Wang Zhilin, Lei Hao. New Correction Method for Oil–Water Relative Permeability Curves on the basis of Water Saturation and Resistivity Relationship, *Transport in Porous Media*, 2015, Volume 109, Issue 3, pp: 527-540. (SCI)
27. Hu Wei, Yang Shenglai, Wang Zhilin, Ma Quanzheng. Optimization analysis of factors affecting hydrocarbon gas drive based on orthogonal experimental design, *Geosystem Engineering*, Volume 17, Issue 6, 2014, pp: 303-310. (EI)
28. Hao Lei, Shenglai Yang, et al. Oil Recovery Performance and CO₂ Storage Potential of CO₂ Water-Alternating-Gas Injection after Continuous CO₂ Injection in a Multilayer Formation. *Energy & fuels*, 2016, 30(11), pp 8922-8931.
29. Zhilin Wang, Shenglai Yang, Hao Lei, et al. Oil recovery performance and permeability reduction mechanisms in miscible CO₂, Water-Alternative-Gas (WAG) injection after continuous CO₂ injection: An experimental investigation and modeling approach[J]. *Journal of Petroleum Science & Engineering*, 2016, 150: 376-385.
30. Chen, Hao; Yang, Shenglai; Xue, Zheng, Experimental study on seismic response during CO₂ sequestration with different phase state, *JOURNAL OF THE ENERGY INSTITUTE*, 2016, 89 (1): 30-39
31. Chen, Hao; Yang, Shenglai; Zhang, Xiansong; Study of phase behavior and physical properties of a natural gas reservoir with high carbon dioxide content, *GREENHOUSE GASES-SCIENCE AND TECHNOLOGY*, 2016, 6 (3) : 428-442
32. Yu Sang, Hao Chen, Shenglai Yang, Xiaozhe Guo, Changsha Zhou, Baihui Fang, Feng Zhou, J.K. Yang, A new mathematical model considering adsorption and desorption process for productivity prediction of volume fractured horizontal wells in shale gas reservoirs, *Journal of Natural Gas Science and Engineering*, 19 (2014): 228~236
33. Yang Shenglai, Wang Xiaoqiang. , Feng Jilei, and Su Yingxian. Test and Study on Rock Pressure Sensitivity for KeLa-2 Gas Reservoir, Tarim Basin[J]. *Petroleum Science*, 2004.1(4)
34. Hao Lei, Shenglai Yang, Kun Qian, et al. Experimental Investigation and Application of the Asphaltene Precipitation Envelope. *Energy & fuels*, 2015, 29: 6920-6927.
35. Hao Chen, Shenglai Yang, Xiangrong Nie, Xiansong Zhang, Wei Huang, Zhilin Wang, and Wei Hu. Ultrasonic Detection and Analysis of Wax Appearance Temperature of Kingfisher Live Oil, *Energy Fuels* 2014, 28, 2422–2428
36. Xiangrong Nie, Shenglai Yang, Jingchen Ding, Liyuan Cao, Feng Zhou, Quanzheng Ma, Zhipeng Qiu. Experimental investigation on permeability evolution law during sand production process of weak sandstone, *Journal of Natural Gas Science and Engineering*, 21 (2014) 248–254
37. Yang S.L. Wu X..H., Wang Y. X., Yang X. Y., Chen H., Li L.C., Zhang X.. Lu H. Wax deposition in pores and the permeability changes for high-wax crude in a sandstone reservoir. *Petroleum Science and technology* 2013, 31(18): 1891-1898. SCI
38. W.-G. Li, S.-L. Yang, X.-Y. Yang, R.-R. Xu, and Z.-L. Wang, Study on Heat Penetrating Coupling Unsteady State Model of Heavy Oil During Steam Flooding, *Petroleum Science and Technology*, 2013, 31(17): 1–10,
39. W.-G. Li, S.-L. Yang, B. Wen, M. Li. Simulation and prediction the rock permeability of The Depth Delay INET in Ultra-deep reservoir [J]. *Energy Sources, Part A*. 2013, 35(9): 840-847. SCI
40. Lu, Hui; Yang, Shenglai; Zhang, Yanbin; Xie, Li; Zhou, Kehou; Ma, Bing; Chen, Hao The study of the oil unit connectivity for microscopic displacement efficiency by CT scan [J]. *Advanced Materials Research*, v 529, p 560-563, 2012, Ei retrieved

41. Yang Guo, Shenglai Yang, Lijun Wang, Minghui Kang, Yuan Wu, Feasibility study on Using Geothermal water to improve the flooding effect in oil Field. Proceedings of 2011 Asia-Pacific Power and Energy Engineering Conference, Volume 4, 3410-3413, Ei retrieved
42. Wang Tao, Yang Shenglai, Zhu Weihong. Law and countermeasures for the casing damage of oil production wells and water injection wells in Tarim Oilfield[J]. Petroleum Exploration and Development. 2011, 38(3): 201-213.
43. X.ZHANG, S.L.YANG, G.Y. LI, W.G. LI, H.CHEN. Compressibility Factor of Gas with High Content of CO₂ in Changshen Gas Reservoir. 2011 International Conference on Computational and Information Sciences;
44. H.LU, S.L.YANG, L.XIE, K.H. ZHOU, B.MA, H.CHEN. An Experimental Study of the Crude Oil Unit Connectivity [C] . The Third China Energy Scientist Forum, Beijing, China, 2011.10;
45. Hu Xuejun, Yang Shenglai, Lu Xiaohu, and Wang Xiaoqiang. The Effect of Temperature On irreducible water saturation Of water-Wet Core[J] Petroleum Science, 2004,1(4): 42~46
46. Yang Shenglai, Jiang liping. EXPERIMENT ON FLOW PATTERN OF HIGH- WAXY CRUDE IN POROUS MEDIUM—A CASE STUDY ON HONGZE RESERVOIR[C], the 2nd International Symposium on Multiphase, Non-Newtonian and Reacting Flows, Academic Publishers, 2004
47. Yang, Sheng-Lai; Liu, Wei; Feng, Ji-Lei; Wang, Ru-Jun; Tu, Zhong; Zhang, You-Cai; Tang, Zhi-Ping; Hang, Da-Zhen. Effect of confining time on reservoirs core permeability [J]. Journal of China University of Petroleum, 2008, 32(1): 64-67