

السيرة الذاتية للدكتور ضياء خفيف خشان ال فرج

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مواقع الويب الخاصة به:

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الشهادات

1. حاصل على شهادة الدكتوراه من جامعة ميزوري للعلوم والتكنولوجيا الاميركية في اختصاص هندسة النفط عام 2018
عنوان الأطروحة:

Integrated Study on the Applicability of CO₂-EOR in Unconventional Liquids Rich Reservoirs

2. حاصل على شهادة الماجستير من جامعة ميزوري للعلوم والتكنولوجيا الاميركية في اختصاص هندسة النفط عام 2016
عنوان الأطروحة:

Study on the Applicability of Relative Permeability Modifiers for Water Shut Off Using Numerical Simulation

3. حاصل على شهادة البكالوريوس من جامعة بغداد في اختصاص هندسة النفط عام 2011

الوظائف الحالية والسابقة

1. مهندس نفط في وزارة النفط- شركة توزيع المنتجات النفطية من عام 2012 ولحد الوقت الحاضر
2. مهندس نفط في وزارة النفط- شركة نفط ميسان في اختصاص حفر الابار النفطية 2011-2012
3. أستاذ باحث في جامعة ميزوري للعلوم والتكنولوجيا الاميركية للفترة 2016-2018
4. استاذ مساعد في جامعة ميزوري للعلوم والتكنولوجيا الاميركية للفترة 2016-2018
5. استاذ ملحق تدريسي في جامعة كربلاء- قسم هندسة النفط من 2018 ولحد الوقت الحاضر
6. استاذ جامعي في جامعة از مير التركية 2020
7. استاذ تدريسي في جامعة العين من 2020 ولحد الوقت الحاضر
8. عضو الهيئة الاستشارية في مركز السبب التخصصي للبحث والنشر العلمي/العتبة الحسينية المقدسة من 2019 ولحد الوقت الحاضر
9. محاضر كورسات برنامج المحاكاة المكمية للشركة الكندية (س م ج) في العراق من 2019 ولحد الوقت الحاضر

التخصصات الدقيقة والاهتمامات البحثية

- **Water-Shutoff Treatments in Oil & Gas Reservoirs**
- **Enhanced Oil Recovery**
- **IOR Methods in Unconventional Liquids Rich Reservoirs**
- **Numerical Simulation Methods in Reservoir Engineering**

العضوية

1. جمعية مهندسي النفط الدولية
2. نقابة المهندسين العراقيين

الجوائز والاعتماد

1. حاصل على جائزة عميد كلية الهندسة والحاسوب لافضل طالب دكتوراه باحث من جامعة ميزوري للعلوم والتكنولوجيا الامريكية 2018
2. الاول على هندسة النفط جامعة بغداد 2011
3. حاصل على جائزة افضل طالب دكتوراه في اختصاص هندسة النفط من جامعة ميزوري للعلوم والتكنولوجيا في الولايات المتحدة 2018
4. حاصل على شهادة من شركة توتال الفرنسية في ادارة المكامن النفطية في تركيا 2010
5. حاصل على جائزة افضل مساهمة كمراجع للبحوث في اختصاص هندسة النفط من مجلة علوم وهندسة النفط الهولندية 2018
6. حاصل على العديد من الجوائز الاخرى وهي كالآتي:
2nd Place Winner Graduate Research Showcase Missouri S& T, Spring 2018
Finalist, SPE Mid-Continent Regional Student Paper Competition Tulsa, OK, 2018
3rd Place Winner in GGPE Student Research Showcase Colloquium Missouri S& T, 2018
Elsevier Journal of Petroleum Science and Engineering (Reviewer) Elsevier, 2017-Current
Elsevier Journal of Petroleum Science (Reviewer) Elsevier, 2018-Current
Finalist, 3MT Competition Student Missouri S& T, 2017
Finalist, SPE Mid-Continent Regional Student Paper Competition Richardson, TX, 2017
MST Petrobowl Team Member Austin, TX, 2016
MST Petrobowl Team Member Denver, CO, 2017

المؤتمرات العلمية

- SPE Improved Oil Recovery Conference** Tulsa, OK, April-2018
SPE Canada Unconventional Resources Conference Calgary, March-2018
Missouri University of Science and Technology 3MT Competition Missouri, December-2017
Abu Dhabi International Petroleum Exhibition & Conference Abu Dhabi, UAE, November, 2017
SPE Kuwait Oil & Gas Show and Conference Kuwait City, Kuwait, October-2017
Carbon Management Technology Conference Houston, Texas, July- 2017
SPE Western Regional Meeting Bakersfield, California, April-2017
SPE Kingdom of Saudi Arabia Annual Technical Symposium Saudi Arabia, April- 2017

المواد العلمية الجامعية التي درسها

- Integrated Reservoir Management** Alayen University, Fall, 2020
Technical English Alayen University, Fall, 2020
Enhanced Oil Recovery I University of Kerbala, Fall, 2020
Enhanced Oil Recovery II University of Kerbala, Spring, 2019-current
Oil Production Systems III University of Kerbala, Fall, 2018
Reservoir Simulation University of Kerbala, Spring, 2019-current
Oil Production Systems III Oil and Gas University - Spring, 2020
Oil Production Systems III Izmir Katip Celebi University, Spring, 2020
Introduction to Petroleum Engineering Izmir Katip Celebi University, Spring, 2020
Rock and Fluid Properties Izmir Katip Celebi University, Spring, 2020
Applied Reservoir Simulation Missouri S& T, Spring, 2017 and 2018
Advanced Reservoir Simulation Missouri S& T, Fall, 2016 and 2017

Book

1. August 2020. Elsevier.
Book Title: *Fundamentals of Enhanced Oil Recovery Methods for Unconventional Oil Reservoirs, Volume 67*. Paperback ISBN: 9780128183434.

THESIS

2. September 2018. (PhD) **Dissertation.**
Title: *Integrated Study on the Applicability of CO₂-EOR in Unconventional Liquids Rich Reservoirs*
Supervisor: Dr. Mingzhen Wei.
3. November 2016. (MS) **Thesis.**
Title: *Study on the Applicability of Relative Permeability Modifiers for Water Shut Off Using Numerical Simulation*
Supervisor: Dr. Baojun Bai.

SELECTED PUBLISHED PAPERS

- 1.** Alfarge, D., Wei, M., Bai, B. (2019, January). Evaluating the performance of hydraulic-fractures in unconventional reservoirs using production data: Comprehensive review. *Journal of Natural Gas Science and Engineering*, Volume 61, 2019, Pages 133-141, ISSN 1875-5100, <https://doi.org/10.1016/j.jngse.2018.11.002>.
- 2.** **Alfarge, D.,** Wei, M., Bai, B., & Almansour, A. (2018, August). Numerical simulation study to understand the performance of RPM gels in water-shutoff treatments, *Journal of Petroleum Science and Engineering*, 2018, ISSN 0920-4105, <https://doi.org/10.1016/j.petrol.2018.07.082>.
- 3.** **Alfarge, D.,** Wei, M., and Bai, B. (2018). CO₂-EOR mechanisms in huff-n-puff operations in shale oil reservoirs based on history matching results, *Fuel*, Volume 226, 2018, Pages 112-120, ISSN 0016-2361, <https://doi.org/10.1016/j.fuel.2018.04.012>.
- 4.** **Alfarge, D.,** Wei, M., Bai, B., & Alsaba, M. (2018). Lessons learned from IOR pilots in Bakken formation by using numerical simulation, *Journal of Petroleum Science and Engineering*, Volume 171, 2018, Pages 1-15, ISSN 0920-4105, <https://doi.org/10.1016/j.petrol.2018.07.025>.
- 5.** **Alfarge, D.,** Wei, M., and Bai, B. (2018). Data Analysis for CO₂-EOR in Shale-Oil Reservoirs Based on a Laboratory Database. *Journal of Petroleum Science and Engineering*. <https://doi.org/10.1016/j.petrol.2017.10.087>.

- 6. Alfarge, D.,** Wei, M., & Bai, B. (2018). A Review of Improved-Oil-Recovery Methods in North American Unconventional Reservoirs. SPE JPT (Volume: 70, Issue: 1) Edited by Carpenter, C.
- 7. Alfarge, D.,** Wei, M., & Bai, B. (2017, July 7). Factors Affecting CO₂-EOR in Shale-Oil Reservoirs: Numerical Simulation Study and Pilot Tests. Journal of Energy& Fuel. DOI: 10.1021/acs.energyfuels.7b01623.
- 8. Alfarge, D.,** Wei, M., & Bai, B. (2017). Numerical Simulation Study on Miscible-EOR Techniques for Improving Oil Recovery in Shale-Oil Reservoirs. Journal of Petroleum Exploration and Production Technology. DOI: 10.1007/s13202-017-0382-7.
- 9. Alfarge, D.,** Wei, M., and Bai, B. 2017. Numerical simulation study of factors affecting relative permeability modification for water-shutoff treatments. *Fuel Journal*, Volume 207, 2017, Pages 226-239, ISSN 0016-2361, <https://doi.org/10.1016/j.fuel.2017.06.041>.
- 10. Alfarge, D.,** Wei, M., Bai, B., & Almansour, A. (2018, August). Numerical Simulation Study on the Applicability of Relative Permeability Modifiers for Water-Shutoff in Oil Production Wells. Society of Petroleum Engineers. doi:10.2118/192414-MS.
- 11. Alfarge, D.,** Wei, M., & Bai, B. (2017, April 23). IOR Methods in Unconventional Reservoirs of North America: Comprehensive Review. Society of Petroleum Engineers. doi:10.2118/185640-MS.
- 12. Alfarge, D.,** Wei, M., Bai, B., & Almansour, A. (2017, June 1). Optimizing Injector-Producer Spacing for CO₂ Injection in Unconventional Reservoirs of North America. Society of Petroleum Engineers. doi:10.2118/188002-MS.
- 13. Alfarge, D.,** Wei, M., Bai, B., & Almansour, A. (2017, June 1). Effect of Molecular-Diffusion Mechanism on CO₂ Huff-n-Puff Process in Shale-Oil Reservoirs. Society of Petroleum Engineers. doi:10.2118/188003-MS.
- 14. Alfarge, D.,** Wei, M., & Bai, B. (2017). Comparative Study for CO₂-EOR and Natural Gases Injection-Techniques for Improving Oil Recovery in Unconventional Oil Reservoirs. Carbon Management Technology Conference. doi:10.7122/485175-MS.
- 15. Alfarge, D.,** Wei, M., & Bai, B. (2017). Applicability of CO₂-EOR in Shale-Oil Reservoirs Using Diagnostic Plots. Carbon Management Technology Conference. doi:10.7122/502143-MS.
- 16. Alfarge, D.,** Wei, M., & Bai, B. (2017). Feasibility of CO₂-EOR in Shale-Oil Reservoirs: Numerical Simulation Study and Pilot Tests. Carbon Management Technology Conference. doi:10.7122/485111-MS.

- 17. Alfarge, D.,** Wei, M., Bai, B., & Alsaba, M. (2017). Analysis of IOR Pilots in Bakken Formation by Using Numerical Simulation. Society of Petroleum Engineers. doi:10.2118/188633-MS.
- 18. Alfarge, D.,** Wei, M., Bai, B., & Alsaba, M. (2017). Selection Criteria for Miscible-Gases to Enhance Oil Recovery in Unconventional Reservoirs of North America. Society of Petroleum Engineers. doi:10.2118/187576-MS.
- 19. Alfarge, D.,** Wei, M., & Bai, B. (2018). Mechanistic Study for the Applicability of CO₂-EOR in Unconventional Liquids Rich Reservoirs. Society of Petroleum Engineers. doi:10.2118/190277-MS.
- 20. Alfarge, D.,** Wei, M., & Bai, B. (2018). Integrated Investigation of CO₂-EOR Mechanisms in Huff-n-Puff Operations Based on History Matching Results. Society of Petroleum Engineers. doi:10.2118/190234-MS.
- 21. Alhuraishawy, A., Alfarge, D.,** Wei, M., & Bai, B. (2018). Influencing Factors Analysis in the Combination of Gel Treatment and Low Salinity Water Flooding Using Sensitivity Analysis. Society of Petroleum Engineers. DOI:10.2118/190357-MS.
- 22. Alfarge, D.,** Wei, M., & Bai, B., (2017). A Parametric Study to Compare Different Miscible Gases to Enhance Oil Recovery in Unconventional Liquids Rich Reservoirs. Society of Petroleum Engineers. doi:10.2118/189785-MS.

فصول الكتاب المنشورة

- 1. Alfarge, D.,** Wei, M., Bai, B. (2020). Comparative analysis between CO₂-EOR mechanisms in conventional reservoirs versus shale and tight reservoirs. *Developments in Petroleum Science*, 2020, 67, pp. 45–63.
- 2. Alfarge, D.,** Wei, M., Bai, B. (2020). The effects of nanopore confinement on different enhanced oil recovery methods. *Developments in Petroleum Science*, 2020, 67, pp. 201–216.
- 3. Alfarge, D.,** Wei, M., Bai, B. (2020). Selection criteria for miscible gases-based EOR in unconventional liquid-rich reservoirs (ULR). *Developments in Petroleum Science*, 2020, 67, pp. 165–183.
- 4. Alfarge, D.,** Wei, M., Bai, B. (2020). The impacts of geomechanics coupling on CO₂-EOR. *Developments in Petroleum Science*, 2020, 67, pp. 217–243.
- 5. Alfarge, D.,** Wei, M., Bai, B. (2020). CO₂-EOR in shale-oil reservoirs based on a laboratory database. *Developments in Petroleum Science*, 2020, 67, pp. 15–44.

- 6. Alfarge, D., Wei, M., Bai, B. (2020). Chemical enhanced oil recovery methods for unconventional reservoirs. *Developments in Petroleum Science*, 2020, 67, pp. 141–163.**
- 7. Alfarge, D., Wei, M., Bai, B. (2020). Comparative and optimization of CO₂ and natural gas EOR methods. *Developments in Petroleum Science*, 2020, 67, pp. 245–265.**
- 8. Alfarge, D., Wei, M., Bai, B. (2020). Other enhanced oil recovery methods for unconventional reservoirs. *Developments in Petroleum Science*, 2020, 67, pp. 185–199.**
- 9. Alfarge, D., Wei, M., Bai, B. (2020). Introduction to shale and tight oil reservoirs. *Developments in Petroleum Science*, 2020, 67, pp. 1–13.**
- 10. Alfarge, D., Wei, M., Bai, B. (2020). Natural gas-based EOR versus CO₂-EOR in shale and tight oil reservoirs. *Developments in Petroleum Science*, 2020, 67, pp. 65–85.**
- 11. Alfarge, D., Wei, M., Bai, B. (2020). Water injection in unconventional reservoirs. *Developments in Petroleum Science*, 2020, 67, pp. 113–140.**
- 12. Alfarge, D., Wei, M., Bai, B. (2020). Air injection in shale and tight oil reservoirs. *Developments in Petroleum Science*, 2020, 67, pp. 87–111.**