NAZAN YALÇIN ERİK

Professor of Geological Engineering

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Academic Profile

Professor of Geological Engineering with research expertise in organic geochemistry, organic petrography, petroleum and coal geology, source-rock evaluation, hydrocarbon generation, energy resources, environmental geology, and energy-transition studies. Her work integrates geochemical and petrographic methods to investigate sedimentary basins, coal-bearing successions, unconventional resources, and the environmental dimensions of energy systems.

Education

- PhD in Geological Engineering, Institute of Science, Cumhuriyet University, 2002. Dissertation: Organic petrography, organofacies, and source-rock characteristics of the Cudi Group units between Nusaybin (Mardin) and Cizre (Şırnak). Supervisor: Prof. Orhan Özçelik. Enrolled 1998; degree awarded 10 May 2002.
- MSc in Geological Engineering, Institute of Science, Cumhuriyet University, 1997. Thesis: Petroleum source-rock and organic-facies characteristics of the area southwest of Bozkır (Konya), Taurus Mountains. Supervisor: Prof. Orhan Özçelik. Enrolled 1994; degree awarded 3 April 1997.
- BSc in Geological Engineering, Faculty of Engineering, Sivas Cumhuriyet University, 1994. Enrolled 1990; degree awarded 20 June 1994.

Academic Appointments

- Professor, Sivas Cumhuriyet University, Faculty of Engineering, 2021-present.
- Associate Professor, Department of Geological Engineering, Division of Mineral Deposits and Geochemistry, Cumhuriyet University, 2012-2021.
- Assistant Professor, Department of Geological Engineering, Cumhuriyet University, 2002-2012.
- Research Assistant, Department of Geological Engineering, Division of Mineral Deposits and Geochemistry, Sivas Cumhuriyet University, 1994-2002.

Administrative and Institutional Service

- Head, Department of Chemistry and Chemical Processing Technologies, Yıldızeli Vocational School, Sivas Cumhuriyet University, 2021-present.
- Member, Faculty Board, Faculty of Engineering, Cumhuriyet University, 2014-2018.
- Member, Executive Board, Faculty of Architecture, Cumhuriyet University, 2013-2015.
- Member, Faculty Board, Faculty of Architecture, Cumhuriyet University, 2013-2015.

Research Interests

- Organic geochemistry and organic petrography
- Petroleum systems, source rocks, and hydrocarbon generation
- Coal geology, coal quality, and coal-derived critical elements
- Sedimentary basins, organofacies, and palaeodepositional environments
- Unconventional oil and gas resources, shale gas, and energy security
- Environmental effects of fossil fuels, climate change, hydrogen, and energy transition

Completed MSc Theses Supervised

1. Harun Çakır (2024). Palaeodepositional characteristics and hydrocarbon-generation potential of Tertiary coals from Divriği, Sivas. MSc thesis, Geological Engineering, Sivas Cumhuriyet University.

2. Al Ghifari Syahronidavi (2024). Palaeodepositional characteristics and hydrocarbon-generation potential of coals from the Barito Basin, South Kalimantan, Indonesia. MSc thesis, Geological Engineering, Sivas Cumhuriyet University.
3. Ceyda Sümeyye Yıldız (2022). Organic-geochemical and organofacies characteristics of the Upper Cretaceous-Palaeocene Tecer Formation east of Ulaş, Sivas. MSc thesis, Geological Engineering, Sivas Cumhuriyet University.
4. Seyide Gül Turgut (2014). Organic-geochemical and organic-petrographic characteristics and trace-element contents of Tertiary Çayırlı-Çilhoroz coals, Erzincan. MSc thesis, Geological Engineering, Cumhuriyet University.
5. Yasemin Aslan (2011). Investigation of the hydrocarbon potential of the Çankırı-Çorum Basin using geophysical and organic-geochemical analyses. MSc thesis, Geophysical Engineering, Cumhuriyet University.
6. Merve Fakılı (2010). Organic-petrographic and organic-geochemical characteristics of Upper Cretaceous-Tertiary carbonate rocks in the Hekimhan Basin, northwestern Malatya. MSc thesis, Geological Engineering, Cumhuriyet University.
7. Selin Sancar (2008). Organic-petrographic and organic-geochemical characteristics of coals in the Hafik region, northeastern Sivas. MSc thesis, Geological Engineering, Cumhuriyet University.
8. Burcu Bilici (2006). Organic-geochemical and organic-petrographic characteristics of Miocene units around Karayün, southeastern Sivas. MSc thesis, Geological Engineering, Cumhuriyet University.
9. Faruk Ay (2006). Petroleum source-rock and organic-facies characteristics of Tertiary units north of Ulaş, Sivas. MSc thesis, Geological Engineering, Cumhuriyet University.

Research Projects

Current and Recent Projects

1. Tracing the Steppe: Natural Transformation through Ecology, Art, and Engineering. Expert, national project, 20 April-19 October 2025.
2. Coal-Bearing Eocene Facies of Northern Türkiye: Comparison of the Tethyan and Eastern European Regions (Eskişehir-Beydili, Kırıkkale-Kazmaca, Çorum-Bayat, Tokat-Artova, and Sivas-Bahçecik basins). Expert; TÜBİTAK project; principal investigator: Mehmet Serkan Akkiraz; launched 26 February 2025; ongoing.
3. Museum Research: Vertebrate Palaeontology and Giant Rhinoceroses. Consultant; national public-sector project; launched 26 February 2025; ongoing.
4. IGCP Project 724: Fluid Geochemistry and Earthquake Forecasting. Project team member/managerial role; international project; launched 15 May 2022; ongoing.
5. Hydrocarbon-Generation Potential of the Miocene Coal-Bearing Sequence in the Barito Basin, South Kalimantan, Indonesia. Principal investigator, 3 September 2023-14 July 2024.
6. Organic-Geochemical and Organofacies Characteristics of the Upper Cretaceous-Palaeocene Tecer Formation east of Ulaş, Sivas. Principal investigator, university-funded research project, 29 January 2021-29 January 2022.
7. Cenozoic Sediments around Bayat, Sungurlu Sub-basin, Çorum: Hydrocarbon-Generation Potential and Organofacies Characteristics. Principal investigator, university-funded research project, 4 December 2018-6 January 2021.
8. Coalification, Hydrocarbon-Generation Potential, and Environmental Effects of Tertiary Coals in the Sivas Basin. Principal investigator, university-funded research project, 19 December 2017-4 February 2020.
9. Hydrocarbon-Generation Potential and Environmental Effects of Tertiary Coals in the Sivas Basin (CÜBAP M-648). Principal investigator, 11 March 2018-18 December 2019.
10. Investigation of the Characteristics and Geodynamics of the Turkish Crust (MTA 2018-30-14-04). Researcher, 4 March-31 December 2018.
11. Geological Research Drilling in Türkiye (MTA 2018-30-14-07). Researcher, 11 March-31 December 2018.
12. Three in One: Nature Education Based on Health, Culture, and Ecology I-II (TÜBİTAK 117B057; 118B516). Expert/instructor, 2017-2019.
13. Organic-Geochemical Characteristics and Petroleum-System Evaluation of the Sedimentary Succession around Çayırlı, Erzincan (MTA 2017-30-14-24). Principal investigator, 25 June-31 December 2017.
14. Organic-Geochemical, Organic-Petrographic, and Trace-Element Characteristics of Tertiary Coals from Arguvan-Parçikan, Malatya. Principal investigator, 1 November 2015-30 November 2016.

Earlier Funded Research

1. Çayırlı-Çilhoroz Tertiary Coals, Erzincan: organic geochemistry, organic petrography, and trace elements (CÜBAP M-509), project manager, 2013-2014.

2. Organic-geochemical assessment of hydrocarbon, petroleum, and bitumen seeps in Türkiye (TÜBİTAK ÇAYDAG 107Y201), researcher, 2008-2011.
3. Integrated organic-geochemical and geophysical investigation of hydrocarbons in the Sivas Basin (CÜBAP M-372), researcher, 2008-2010.
4. Organic petrography, organic geochemistry, and hydrocarbon-generation potential of Kangal coals, Sivas (TÜBİTAK 108Y111), project manager, 2008-2010.
5. Upper Cretaceous-Tertiary carbonate rocks of the Hekimhan Basin, northwestern Malatya (CÜBAP M-380), project manager, 2009-2010.
6. Organic-petrographic and organic-geochemical characteristics of Tertiary Artova-Zile coals, Tokat (CÜBAP M-364), project manager, 2008-2010.
7. Organic-geochemical and organic-petrographic characteristics of Hafik coals, northeastern Sivas (CÜBAP M-319), project manager, 2005-2007.
8. Organic-geochemical and organic-petrographic characteristics of Miocene units around Karayün, southeastern Sivas (CÜBAP M-291), project manager, 2004-2005.
9. Petroleum source-rock and organofacies characteristics of Tertiary units north of Ulaş, Sivas (CÜBAP M-298), project manager, 2004-2005.
10. Cudi Group units between Nusaybin and Cizre: organic petrography, organofacies, and source-rock characteristics (CÜBAP M-168), researcher, 1998-2002.
11. Petroleum source-rock and organic-facies characteristics southwest of Bozkır, Konya (CÜBAP M-77), assistant researcher, 1995-1997.

Teaching

- Associate degree: Natural Disasters (Turkish; 2 hours; Spring 2024-2025); Sustainable Energy (Turkish; 2 hours; 2023-2024).
- Undergraduate: Petroleum and Coal Geology; Environmental Geology (Turkish; 2 hours each; 2023-2024).
- Graduate: Organic-Geochemical Methods in Hydrocarbon Exploration; Bituminous Shales; Alternative Methods in Hydrocarbon Exploration; Energy Resources (Turkish; 3 hours each; 2023-2024).

Books

1. Yalçın Erik, N. (2024). The Oil and Gas Industry: From Past to Future. Gece Kitaplığı, 1st ed., 580 pp. ISBN 978-625-388-092-7. [In Turkish]
2. Yalçın Erik, N. (2022). Petroleum and Evaporites. Gece Kitaplığı, 1st ed., 305 pp. ISBN 978-625-430-511-5. [In Turkish]
3. Yalçın Erik, N. (2021). Annotated Dictionary of Energy and Energy-Resource Terms. Gece Kitaplığı, 1st ed., 993 pp. ISBN 978-625-7633-34-5. [In Turkish]
4. Yalçın Erik, N. (2019). Shale Gas. Nobel Scientific Works, 1st ed., 485 pp. ISBN 978-605-7662-18-7. [In Turkish]
5. Aslan Topçuoğlu, Y., Büyüksaraç, A., & Yalçın Erik, N. (2016). Investigation of the Hydrocarbon Potential of the Çankırı-Çorum Basin. Türkiye Alim Kitapları, 1st ed., 200 pp. ISBN 978-3-639-81368-5. [In Turkish]
6. Yalçın Erik, N. (2015). Organic-Geochemical Terms Used in Petroleum and Coal Geology. Cumhuriyet University, 1st ed., 250 pp. ISBN 978-605-4561-40-7. [In Turkish]

Book Chapters

1. Yalçın Erik, N. (2025). The historical evolution of awareness of global climate change and the shaping of international policy processes. In E. Hürdoğan (Ed.), International Research and Assessments in Engineering. Gece Kitaplığı. ISBN 978-625-388-818-3. [In Turkish]
2. Yalçın Erik, N. (2025). Cross-sector energy integration and the role of hydrogen: New approaches in the context of decarbonisation strategies. In E. Hürdoğan (Ed.), International Research and Assessments in Engineering. Gece Kitaplığı. ISBN 978-625-388-818-3. [In Turkish]
3. Yalçın Erik, N. (2025). The life cycle of oil and gas assets: A systematic analysis of strategic, environmental, and political perspectives in the age of energy transition. In A. Bideci (Ed.), Engineering: Theory, Methodology, and Practice. Platanus Publishing. ISBN 978-625-6517-51-6. [In Turkish]
4. Ay, F., Yalçın Erik, N., & Alper Ay, F. (2025). Environmental awareness for a sustainable future: A study of university students. In Impact of Environmental Degradation on Ecosystems and Preventive Measures. IGI Global Scientific Publishing. ISBN 9798337315492. [In English]

5. Yalçın Erik, N., & Karadaş, H. A. (2019). The energy potential of Sivas and future projections. In İ. N. Yalman (Ed.), The Economy of Sivas. Sivas Provincial Library. ISBN 978-975-17-4264-3. [In Turkish]
6. Yalçın Erik, N., & Koşaroğlu, Ş. M. (2019). Evaluation of the mining potential and economic dimensions of Sivas Province. In İ. N. Yalman (Ed.), The Economy of Sivas: Past, Present, and Future. Altan Printing. ISBN 978-975-17-4264-3. [In Turkish]

International Peer-Reviewed Journal Articles

1. Ali, F., Yalçın Erik, N., Zhang, S., Fathy, D., & Kontakiotis, G. (2026). Unconventional Lower-Middle Jurassic source-rock prospects in the Indus Basin, Pakistan: An integrated petrographic, geochemical, and maturity-modelling investigation. Journal of Petroleum Geology, 1-19. https://doi.org/10.1111/jpg.70073
2. Yalçın Erik, N. (2025). From shale to strategy: Analysis of Türkiye's unconventional oil and gas resources and future perspectives. Azerbaijan Geologist, 28, 48-65.
3. Yalçın Erik, N., & Ay, F. (2024). Bibliometric analysis of organic-facies studies, 1979-2024. Electronic Letters on Science & Engineering, 20(2), 91-113.
4. Yalçın Erik, N., & Ay, F. (2023). Source-rock characterisation and hydrocarbon-generation potential of Çilhoroz coals, Eastern Anatolia, Türkiye: A petrographic and geochemical approach. Petroleum and Coal, 65(2), 312-333.
5. Yalçın Erik, N. (2022). The influence of coal properties on clean-coal technologies (gasification, liquefaction, carbon fibre, and coke production): A review. International Journal of Western Black Sea Engineering and Science, 4(2), 22-56. [In Turkish]
6. Yalçın Erik, N., & Ay, F. (2021). Use of petrological and organic-geochemical data to determine the hydrocarbon-generation potential of coals: Miocene coals of the Malatya Basin, Eastern Anatolia, Türkiye. International Journal of Coal Science & Technology, 8(4), 510-533.
7. Buldur, S., Bursal, M., Yalçın Erik, N., & Yücel, E. (2020). The impact of an outdoor education project on middle-school students' perceptions and awareness of renewable energy. Renewable and Sustainable Energy Reviews, 134, 110364. https://doi.org/10.1016/j.rser.2020.110364
8. Yalçın Erik, N., & Ay, F. (2019). Characteristics of selected Turkish lignites and their potential use in agriculture. European Journal of Engineering and Natural Sciences, 3(2), 42-45.
9. Yalçın Erik, N. (2018). Hydrocarbon-generation potential of Late Cretaceous shales and carbonates in the Hekimhan Basin and their genetic relationship with the Karadere oil seep, Eastern Anatolia, Türkiye. Journal of Petroleum Exploration and Production Technology, 8(4), 1139-1158.
10. Yalçın Erik, N. (2018). Biomarker indicators of the palaeodepositional environment of Eocene formations around Zara-Bolucan, Central Anatolia, Türkiye. Advances in Geo-Energy Research, 2(3), 237-244.
11. Özçelik, O., Altunsoy, M., Yalçın Erik, N., Karadirek, S., & Ünal, N. (2017). Biomarker characteristics of the Triassic Kasımlar Formation, Akseki-Anamas Platform, Western Taurus, Türkiye. Journal of Scientific and Engineering Research, 4(6), 141-147.
12. Yalçın Erik, N. (2016). Palaeoenvironmental characteristics and hydrocarbon potential of Lower Miocene bituminous shales in the Sivas Basin, Central Anatolia, Türkiye. Arabian Journal of Geosciences. https://doi.org/10.1007/s12517-015-2063-5
13. Yalçın Erik, N., Aydemir, A., & Büyüksaraç, A. (2015). Organic-matter properties and hydrocarbon potential of the Sivas Basin, Central-Eastern Anatolia, Türkiye, based on Rock-Eval data and organic petrography. Journal of Petroleum Science and Engineering, 127, 148-168.
14. Ünal, N., Hökerek, S., Altunsoy, M., Özçelik, O., & Yalçın Erik, N. (2014). Biomarker properties and comparisons of coaly Plio-Miocene deposits at Şahinali, Beypazarı, and Karapınar, Türkiye. Energy Procedia, 59, 142-149.
15. Koşaroğlu, S., & Yalçın Erik, N. (2014). Application of ground-penetrating radar to near-surface coal seams. Proceedings of the 11th International Multidisciplinary Scientific GeoConference.
16. Yalçın Erik, N., & Ay, F. (2013). Organic-geochemical characterisation and hydrocarbon potential of Tertiary coals in Tokat Province, Central Anatolia, Türkiye. Energy Sources, Part A, 35, 991-999.
17. Aslan, Y., Büyüksaraç, A., Yalçın Erik, N., Aydemir, A., & Ateş, A. (2013). Geophysical investigation and hydrocarbon potential of the Çankırı-Çorum Basin, Türkiye. Journal of Petroleum Science and Engineering, 110, 94-108.
18. Toprak, S., & Yalçın Erik, N. (2011). Petrographic properties and unusual features of Kangal coals, Sivas, Türkiye. International Journal of Coal Geology, 86, 297-305.
19. Yalçın Erik, N. (2011). Hydrocarbon-generation potential and Miocene-Pliocene palaeoenvironments of the Kangal Basin, Central Anatolia, Türkiye. Journal of Asian Earth Sciences, 42, 1146-1162.
20. Yalçın Erik, N., & Yılmaz, I. (2011). Conventional and soft-computing models for predicting the gross calorific value of coal. International Journal of Coal Preparation and Utilization, 31, 32-59.
21. Özçelik, O., Tüze, Z., Altunsoy, M., Hökerek, S., Yalçın Erik, N., Taka, M., & Acar, F. (2011). Organic-facies variation in well data from coaly Pliocene units in Karapınar, Konya, Türkiye. Proceedings of the 11th International Multidisciplinary Scientific GeoConference, 193-199.
22. Büyüksaraç, A., & Yalçın Erik, N. (2010). Comment on 'Comparative petroleum-system analysis of the interior basins of Türkiye: Implications for petroleum potential.' Marine and Petroleum Geology, 27(7), 1676-1677.
23. Yılmaz, I., Yalçın Erik, N., & Kaynar, O. (2010). Neural-network learning algorithms for predicting the calorific value of coals. Scientific Research and Essays, 5(16), 2242-2249.

24. Yalçın Erik, N. (2010). Organic-geochemical characteristics of the Hafik coal deposits, Sivas Basin, Türkiye. Geologie, 192-198.
25. Kavak, O., Connan, J., Yalçın Erik, N., & Yalçın, M. N. (2010). Organic-geochemical characteristics of Şırnak asphaltites, southeastern Anatolia, Türkiye. Oil Shale, 27(1), 58-83.
26. Yalçın Erik, N., & Sancar, S. (2010). Relationship between coal quality and organic-geochemical parameters: A case study of the Hafik coal deposits, Sivas Basin, Türkiye. International Journal of Coal Geology, 83, 396-414.
27. Özçelik, O., Altunsoy, M., Acar, F., & Yalçın Erik, N. (2009). Organic-geochemical characteristics of the Miocene Lycian Basin, Western Taurides, Türkiye. International Geology Review, 51(1), 77-93.
28. Yalçın Erik, N., & Özçelik, O. (2007). Organic-facies variation in well data from the Cudi Group, eastern southeastern Türkiye. Geochemistry International, 45(11), 1152-1163.
29. Yalçın Erik, N., Özçelik, O., & Altunsoy, M. (2006). Interpreting Rock-Eval pyrolysis data using S2-versus-TOC plots: Middle Triassic-Lower Jurassic units in eastern southeastern Türkiye. Journal of Petroleum Science and Engineering, 53(1), 34-46.
30. Yalçın Erik, N., Özçelik, O., Altunsoy, M., & İllez, H. İ. (2005). Source-rock and hydrocarbon potential of Middle Triassic-Lower Jurassic Cudi Group units, eastern southeastern Türkiye. International Geology Review, 47(4), 398-419.
31. Altunsoy, M., Özçelik, O., & Yalçın Erik, N. (2004). Organic-geochemical characteristics of bituminous Eocene units in the Çorum-Suluova Basin, Central Anatolia, Türkiye. Petroleum Geoscience, 10(2), 163-171.

National Peer-Reviewed Journal Articles

1. Ay, F., & Yalçın Erik, N. (2022). Awareness of energy-saving behaviour among students: The case of Sivas Cumhuriyet University. Recep Tayyip Erdoğan University Journal of Social Sciences. [In Turkish]
2. Yalçın Erik, N. (2022). A non-traditional source of critical minerals: Rare earth elements + Y (REY) and Sc contents of selected Turkish low-rank coals. KSU Journal of Engineering Sciences, 25(2), 155-172.
3. Yalçın Erik, N. (2021). A new Middle East? The oil and gas potential of Sub-Saharan Africa and its importance in the global energy sector. AHBV Journal of Mediterranean Basin and African Civilizations, 3(2), 25-47. [In Turkish]
4. Ay, F., & Yalçın Erik, N. (2020). Knowledge and perceptions of university students regarding global warming and climate change. Cumhuriyet University Journal of Social Sciences, 44(2), 1-18. [In Turkish]
5. Buldur, S., Bursal, M., Yücel, E., & Yalçın Erik, N. (2018). Effects of an interdisciplinary nature-education project on middle-school students' environmental attitudes and awareness. Journal of the Human and Social Science Researches, 7(5), 284-303. [In Turkish]
6. Yalçın Erik, N., & Ay, F. (2018). Palaeodepositional environment and coalification characteristics of Çilhoroz coals, Çayırlı-Erzincan. Journal of Engineering and Earth Sciences, 3(1), 11-29. [In Turkish]
7. Yalçın Erik, N., Aslan Topçuoğlu, Y., & Büyüksaraç, A. (2018). Organic-geochemical characteristics of Alpagut-Dodurga coals, Çorum. Pamukkale University Journal of Engineering Sciences, 24(3), 566-575. https://doi.org/10.5505/pajes.2017.97513 [In Turkish]
8. Yalçın Erik, N. (2017). Use of biomarker data in biodetection, crude-oil seepage, and environmental-pollution research. Anadolu University Journal of Science and Technology B. [In Turkish]
9. Yalçın Erik, N., & Koşaroğlu, Ş. M. (2016). Changing world oil prices through history: Drivers and projections. Cumhuriyet University Journal of Economics and Administrative Sciences, 17(2), 119-143. [In Turkish]
10. Yalçın Erik, N. (2016). Shale gas: Geological characteristics, environmental effects, and global economic significance. Geological Bulletin of Türkiye, 59(2), 211-237. [In Turkish]
11. Yalçın Erik, N. (2016). Shale gas, tight gas, and their environmental effects. Cumhuriyet University Journal of Science, 37(4), 31-43. [In Turkish]
12. Yalçın Erik, N., & Fakılı, M. (2015). The Karadere oil seep in the Hekimhan Basin and the organic-geochemical characteristics and genetic relationships of the Hekimhan Formation, Eastern Anatolia, Türkiye. TPJD Bulletin. [In Turkish]
13. Yalçın Erik, N. (2015). Oil-tanker accidents and the resulting environmental pollution. Mavi Gezegen, 20, 1-11. [In Turkish]
14. Yalçın Erik, N., & Turgut, S. G. (2013). Organic-facies evaluation of Carboniferous and Permian units around Pınarbaşı-Sarız, Kayseri. Cumhuriyet University Faculty of Engineering Journal, Series A: Earth Sciences. [In Turkish]
15. Yalçın Erik, N. (2010). Use of biomarker data to determine coalification and palaeoenvironmental characteristics: Kangal coals, Sivas, Türkiye. Istanbul Journal of Earth Sciences, 23(1), 19-37. [In Turkish]
16. Yalçın Erik, N., & Ay, F. (2010). Organic-geochemical characteristics and hydrocarbon-generation potential of Tertiary Artova and Zile coals, Tokat. Yerbilimleri, 31(3), 169-190. [In Turkish]
17. Yalçın Erik, N., Sancar, S., & Toprak, S. (2008). Organic-geochemical and organic-petrographic characteristics of Hafik coals, Sivas. Journal of the Turkish Association of Petroleum Geologists, 20(2), 9-33. [In Turkish]
18. Yalçın Erik, N., Özçelik, O., Altunsoy, M., & Atalay, Z. (2003). Well-data evaluation of hydrocarbon source rocks in Eocene sediments between Merzifon, Suluova, and Amasya. Süleyman Demirel University Journal of the Institute of Science. [In Turkish]

19. Yalçın Erik, N., & Ay, F. (2003). Petroleum source-rock and organic-facies characteristics of Tertiary units north of Ulaş, Sivas. Cumhuriyet University Faculty of Engineering Journal, Series A: Earth Sciences, 20(1), 38-51. [In Turkish]
20. Yalçın Erik, N., & Bilici, B. (2003). Organic-geochemical, organic-petrographic, and organic-facies characteristics of Miocene units around Karayün, southeastern Sivas. Cumhuriyet University Faculty of Engineering Journal, Series A: Earth Sciences, 20(1), 25-37. [In Turkish]
21. Yalçın Erik, N. (1998). Problems encountered in Rock-Eval pyrolysis analysis and data interpretation. Cumhuriyet University Faculty of Engineering Journal, Series A: Earth Sciences, 15(1), 51-60. [In Turkish]
22. Özçelik, O., & Yalçın Erik, N. (1998). Provenance characteristics of Oligocene sandstones south of Şarkışla, Sivas. Cumhuriyet University Faculty of Engineering Journal, Series A: Earth Sciences, 15(1), 41-50. [In Turkish]
23. Özçelik, O., Altunsoy, M., & Yalçın Erik, N. (1997). Stratigraphic characteristics south of Lake Suğla, Konya. Cumhuriyet University Faculty of Engineering Journal, Series A: Earth Sciences, 14(1), 57-70. [In Turkish]

Selected International Conference Contributions

The source record contains 67 international conference contributions. The following list presents recent and representative items in a standardised English format.

1. Yalçın Erik, N. (2026). Venezuela's oil reserve-production paradox: Geological constraints and supply security. 78th Geological Congress of Türkiye with International Participation. Oral presentation.
2. Yalçın Erik, N. (2025). From shale to strategy: Analysis of Türkiye's unconventional oil and gas resources and future perspectives. XIII Respublica Scientific Conference. Invited speaker.
3. Yalçın Erik, N. (2025). The paradoxical role of coal in the global energy system: Historical legacy, contemporary crisis, and future projections. 5th International World Energy Conference, 509-515. Oral presentation.
4. Yalçın Erik, N. (2025). Green hydrogen and Türkiye's role in the sustainable energy transition. 5th International Conference on Trends in Advanced Research, 444-448. Oral presentation.
5. Yalçın Erik, N. (2025). Energy-transition pressures in the oil and gas sector: Strategies, risks, and opportunities. 5th International Conference on Trends in Advanced Research, 439-443. Oral presentation.
6. Yalçın Erik, N. (2025). The strategic importance of hydrogen in the energy transition: Sustainable approaches to climate-change mitigation. 5th International Conference on Trends in Advanced Research, 432-438. Oral presentation.
7. Yalçın Erik, N. (2025). Natural gas: A bridge or a dead end? 5th International Conference on Trends in Advanced Research, 426-431. Oral presentation.
8. Ay, F., & Yalçın Erik, N. (2025). Global-warming research in engineering: A Scopus-based bibliometric perspective. International Multidisciplinary Scientific Research Congress. Oral presentation.
9. Ay, F., & Yalçın Erik, N. (2025). Confronting a warming planet: Human challenges and adaptive responses. International Multidisciplinary Scientific Research Congress. Oral presentation.
10. Yalçın Erik, N. (2024). Artificial intelligence in the oil and gas sector. 3rd International Conference on Scientific and Innovative Studies. Oral presentation. [Presented in Turkish]
11. Yalçın Erik, N. (2024). Women in the energy sector: A brief assessment of gender equality and key challenges. 4th International Conference on Scientific and Academic Research. Oral presentation. [Presented in Turkish]
12. Yalçın Erik, N. (2024). Renewable energy, global climate change, and the outlook for global petroleum markets. 4th International Conference on Scientific and Academic Research. Oral presentation. [Presented in Turkish]
13. Yalçın Erik, N., & Ay, F. (2024). Bibliometric analysis of coal source-rock studies, 1988-2024. 3rd International Conference on Frontiers in Academic Research. Oral presentation.
14. Yalçın Erik, N. (2024). Coal as a non-traditional energy source: Coal-derived hydrocarbons. 3rd International Conference on Frontiers in Academic Research. Oral presentation.
15. Yalçın Erik, N. (2024). The changing role of coal in the net-zero goal: Rare-earth elements (REE+Y) and Sc in Turkish coals. 3rd International Conference on Frontiers in Academic Research. Oral presentation.
16. Yalçın Erik, N., & Al Ghifari, S. (2024). Hydrocarbon-generation potential of the Miocene coal sequence in the Barito Basin, South Kalimantan, Indonesia. 3rd International Conference on Frontiers in Academic Research. Oral presentation.
17. Yalçın Erik, N. (2024). Oil and gas exploration in the Arctic and deep waters in relation to global climate change. 3rd International Conference on Frontiers in Academic Research. Oral presentation.
18. Yalçın Erik, N. (2023). Terpane and sterane biomarkers as indicators of organic-matter input and depositional environments in Eocene sediments around Zara and Bozbel, Sivas, Türkiye. IPETGAS 2023. Poster.
19. Çakır, H., & Yalçın Erik, N. (2023). Palaeodepositional characteristics of Miocene coals in the Divriği-Selimoğlu coal district, Sivas, using organic-geochemical and organic-petrographic data. IPETGAS 2023. Poster.
20. Al Ghifari, S., & Yalçın Erik, N. (2023). Organofacies and palaeodepositional environment of the Northeast Java Basin, Indonesia: Hydrocarbon generation and expulsion based on organic-geochemical analysis. IPETGAS 2023. Poster.
21. Yüce, G., & Yalçın Erik, N. (2023). Seismic-fluid geochemistry and short-term earthquake forecasting. Goldschmidt 2023. Poster. https://doi.org/10.7185/gold2023.13726

22. Yalçın Erik, N. (2022). The resource-curse/abundance paradox from past to present: Is petroleum a blessing or a curse? 3rd International Conference on Applied Engineering and Natural Sciences. Oral presentation. [Presented in Turkish]
23. Yalçın Erik, N. (2022). Are oil and natural gas being depleted? The future of fossil fuels in the energy sector. 3rd International Conference on Applied Engineering and Natural Sciences. Oral presentation. [Presented in Turkish]
24. Yalçın Erik, N. (2022). The place and importance of unconventional energy resources in the global energy sector. 1st International Conference on Engineering and Applied Natural Sciences. Oral presentation. [Presented in Turkish]
25. Yalçın Erik, N. (2022). Global energy security, sustainable development, and climate change. 1st International Conference on Engineering and Applied Natural Sciences. Oral presentation. [Presented in Turkish]
26. Yalçın Erik, N. (2019). Chemical composition and rare-earth-element contents of coals and bituminous shales from the Divriği-Selimoğlu coalfield, Sivas, Türkiye. WMESS 2019. Poster.
27. Yalçın Erik, N. (2018). Source-rock characteristics, depositional setting, and hydrocarbon-generation potential of an Upper Miocene coal-bearing unit in the Parçikan Formation, Malatya Basin, Türkiye. WMESS 2018. Oral presentation.
28. Yalçın Erik, N. (2018). Depositional-environment characteristics of Upper Cretaceous sediments in the Hekimhan Basin, Eastern Anatolia: A biomarker and carbon-isotope approach. Geobalcanica 2018. Oral presentation. https://doi.org/10.18509/GBP.2018.17
29. Alkan Gün, B., Yalçın Erik, N., & Çemen, İ. (2017). Petroleum-system analysis of the Kırkkavak Formation in the Haymana Basin, Central Anatolia, Türkiye. Geological Society of America Annual Meeting, Seattle. Oral presentation.
30. Yalçın Erik, N., & Ay, F. (2017). Environmentally friendly fertiliser characteristics of selected Turkish lignites and their agricultural potential. 3rd International Conference on Environmental Science and Technology. Oral presentation.

Editorial Experience

- Editorial role, Advances in Geo-Energy Research, Ausasia Science and Technology Press, Australia.
- Editorial Board Member, Journal of Geological Engineering (TR Dizin), Chamber of Geological Engineers of Türkiye, since 1 July 2015.
- Assistant Editor, Advances in Geoscience, Ausasia Science and Technology Press, Australia.
- Assistant Editor, Cumhuriyet Earth Sciences, Cumhuriyet University.
- Editor, International Research and Evaluations in Chemical Engineering, Gece Kitaplığı, 25-26 October 2025.

Professional Memberships

- European Association of Geoscientists and Engineers (EAGE).
- Women in Geoscience & Engineering (WGE), member since 2024.
- International Journal of Economic and Environmental Geology, member since 2023.
- Association of Mining Geologists, member since 2021.
- Union of Earth-Science, Mining, and Metallurgy Professionals, member since 2021.

Certificates and Professional Development

- SOCAR Energy School, SOCAR Türkiye and Sabancı University Executive Development Unit (90-hour hybrid programme), 12 November 2023-24 January 2024.
- Memory-Techniques Trainer Certificate, Yeditepe University Continuing Education Centre, 23-29 October 2021.
- Educational Consultancy Certificate, Yeditepe University Continuing Education Centre, 16-22 October 2021.
- Education and Student Coaching Certificate, 27 September-15 October 2021.
- Education and Student Coach Certification, Istanbul NLP Coaching Academy, 15 September-15 October 2021.
- Academic Mentoring Certificate Programme, Ege University, 6-9 April 2021.
- Training of Trainers, Sivas Cumhuriyet University, 15-19 April 2019.
- Renewable-Energy Technologies Certificate Programme, Istanbul Technical University Energy Institute, 8-11 June 2014.
- Occupational Health and Safety Trainer Certificate, Sivas, 12-20 January 2014.

Public Engagement and Invited Talks

- The Oil and Gas Industry: From Past to Future, online invited talk, 13 March 2025.
- TÜBİTAK Science Talks: Global Warming and Climate Change, Şehit Faruk Aydoğdu Middle School, 23 November 2023; Karalar Middle School, Sivas, 3 November 2023; Karacaören Middle School, Yıldızeli, 2023.
- The Importance of Unconventional Energy Resources in the Global Energy Sector, Professional Development Association of Mining Engineers seminar series, 1 November 2023.
- TÜBİTAK Science Talks: Can Natural Disasters Be Predicted?, Asım Özden Regional Boarding Middle School, 26 May 2022.
- TÜBİTAK Science Talks: Natural Disasters and Disaster Management, Şehit Hasan Subaşı Kürkçüyurt Middle School, Sivas, 13 May 2022.
- TÜBİTAK Science Talks: The Million-Year Journey of Black Gold - Can Organisms Become Jet Fuel?, Asef Çoban Anatolian High School, 3 December 2019.