

# Prof. Sedat İnan

## Personal Information

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## Biography

Sedat is a geoscientist specializing in petroleum geology and geochemistry and active tectonics. He has 25+ years of experience of research aiding petroleum and coal exploration and exploitation in many sedimentary basins of the World. Basin and Petroleum Systems Modeling is also Sedat's main area of research interest and experience. For past several years, Sedat has been also involved in assessment of unconventional hydrocarbon resources by applying multi-disciplinary methods. He has special interest in simulation of oil generation within and expulsion from prolific source rocks by laboratory artificial maturation using a setup he introduced as "restricted system pyrolysis" which he patented with US Patent Office. He is a believer that geoscientific challenges can be tackled by team work and collaboration between professionals from related disciplines.

## Education Information

Doctorate, Pennsylvania State University University College Park Campus, College of Energy and Minerals, Geosciences, United States Of America 1989 - 1993

Post Graduate, University of New Orleans, College of Sciences, Geology and Geophysics, United States Of America 1988 - 1989

Under Graduate, Istanbul Technical University, Maden, Jeoloji Mühendisliği, Turkey 1982 - 1986

## Foreign Languages

English, C2 Proficiency

## Research Areas

Coal Geology, Petroleum Geology, Petroleum Geochemistry

## Academic Titles / Tasks

Professor, Istanbul Technical University, Maden, Jeoloji Mühendisliği, 2020 - Continues

Professor, Istanbul Technical University, Denizcilik, Temel Bilimler, 2012 - 2012

## Professional Experience

Visiting Scientist, Active Tectonics, 2019 - 2020

Senior Researcher, Advanced Research Center, 2012 - 2019

Institute Director, Earth and Marine Sciences Institute, 2005 - 2012

Advisor to President, President's Office, 2001 - 2005

Institute Deputy Director, Earth and Marine Sciences Institute, 2000 - 2001

Senior- and Chief-Scientist, Earth and Marine Sciences Institute, 1994 - 2000

## Advising Theses

İnan S., Yalçın M. N. , Jeolojik, pedolojik ve atmosferik koşulların toprak radon gazının hareketine etkileri, Doctorate, C.SEYİS(Student), 2015

## Articles Published in Journals That Entered SCI, SSCI and AHCI Indexes

- **Palynofacies, paleoenvironment and thermal maturity of early Silurian shales in Saudi Arabia (Qusaiba Member of Qalibah Formation)**  
Ertug K., Vecoli M., İnan S.  
Review of Palaeobotany and Palynology, vol.270, pp.8-18, 2019 (Journal Indexed in SCI)
- **Formation and occurrence of organic matter-hosted porosity in shales**  
İnan S., Al Badairy H., İnan T., Al Zahrani A.  
International Journal of Coal Geology, vol.199, pp.39-51, 2018 (Journal Indexed in SCI)
- **Thermo-vaporization for decontaminating hydrocarbon source rocks**  
İnan S., Qathami S., Zahrani M., Alsobaie M.  
International Journal of Coal Geology, vol.189, pp.111-121, 2018 (Journal Indexed in SCI)
- **Oxidation Tmax: A new thermal maturity indicator for hydrocarbon source rocks**  
İnan S., Henderson S., Qathami S.  
Organic Geochemistry, vol.113, pp.254-261, 2017 (Journal Indexed in SCI)
- **A basin modeling study of the Jafurah Sub-Basin, Saudi Arabia: Implications for unconventional hydrocarbon potential of the Jurassic Tuwaiq Mountain Formation**  
Hakami A., İnan S.  
International Journal of Coal Geology, vol.165, pp.201-222, 2016 (Journal Indexed in SCI)
- **Microscale organic maturity determination of graptolites using Raman spectroscopy**  
Schmidt Mumm A., İnan S.  
International Journal of Coal Geology, vol.162, pp.96-107, 2016 (Journal Indexed in SCI)
- **The Silurian Qusaiba Hot Shales of Saudi Arabia: An integrated assessment of thermal maturity**  
İnan S., Goodarzi F., Schmidt Mumm A., Arouri K., Qathami S., Ardakani O. H. , İnan T., Tuwailib A. A.  
International Journal of Coal Geology, vol.159, pp.107-119, 2016 (Journal Indexed in SCI)
- **Coal occurrence in the Jurassic Dhurma Formation in Saudi Arabia: Inferences on its gas and surface mining potential**  
Al-Mahmoud M. J. , İnan S., Al-Duaiji A. A.  
International Journal of Coal Geology, vol.124, pp.5-10, 2014 (Journal Indexed in SCI)
- **Geochemical Monitoring Along the Türkoğlu (Kahramanmaraş)-Gölbaşı (Adıyaman) Segments of the East Anatolian Fault System**  
Kop A., Ezer M., Bodur M. N. , Darbaş G., İnan S., Ergintav S., Seyis C., Yalçın C.  
Arabian Journal for Science and Engineering, vol.39, pp.5521-5536, 2014 (Journal Indexed in SCI)
- **A homogeneous earthquake catalog for western Turkey and magnitude of completeness determination**  
Leptokaropoulos K. M. , Karakostas V. G. , Papadimitriou E. E. , Adamaki A. K. , Tan O., İnan S.  
Bulletin of the Seismological Society of America, vol.103, pp.2739-2751, 2013 (Journal Indexed in SCI)
- **Kinematic study at the junction of the East Anatolian fault and the Dead Sea fault from GPS measurements**  
Mahmoud Y., MASSON F., MEGHRAOUI M., Çakır Z., ALCHALBIA., YAVASOGLU H., Yonlu O., DAOUD M., ERGINTAV S., İNAN S.  
JOURNAL OF GEODYNAMICS, vol.67, pp.30-39, 2013 (Journal Indexed in SCI)
- **Microplate boundaries as obstacles to pre-earthquake strain transfer in Western Turkey: Inferences from continuous geochemical monitoring**  
İnan S., Pabuçcu Z., Kulak F., Ergintav S., Tatar O., Altunel E., Akyüz S., Tan O., Seyis C., Çakmak R., et al.  
Journal of Asian Earth Sciences, vol.48, pp.56-71, 2012 (Journal Indexed in SCI Expanded)
- **Seasonal variations in soil radon emanation: Long-term continuous monitoring in light of seismicity**  
İnan S., Kop A., ÇETİN H., Kulak F., Pabuçcu Z., Seyis C., Ergintav S., Tan O., Saatçılar R., Bodur M. N.  
Natural Hazards, vol.62, pp.575-591, 2012 (Journal Indexed in SCI)

- **Springwater chemical anomalies prior to the mw = 7.2 Van Earthquake (Turkey)**  
Inan S., Yakan H., Balderer W. P. , Leuenberger-west F., Özvan A., Freund F. T. , Freund F. T. , Freund F. T.  
Geochemical Journal, vol.46, 2012 (Journal Indexed in SCI)
- **Aftershock study and seismotectonic implications of the 8 March 2010 Kovancilar (Elazig, Turkey) earthquake (M-W=6.1)**  
Tan O., Pabuccu Z., Tapirdamaz M. C. , Inan S., Ergintav S., Eyidogan H., AKSOY E., Kuluozturk F.  
GEOPHYSICAL RESEARCH LETTERS, vol.38, 2011 (Journal Indexed in SCI)
- **Structural framework of onshore and offshore Avcilar, İstanbul under the influence of the North Anatolian fault**  
Ergintav S., Demirbağ E., Ediger V., Saatçılar R., Inan S., Cankurtaranlar A., Dikbaş A., Baş M.  
Geophysical Journal International, vol.185, pp.93-105, 2011 (Journal Indexed in SCI)
- **Structural framework of onshore and offshore Avcilar İstanbul under the influence of the North Anatolian Fault**  
ERGINTAV S., Demirbağ M. E. , Ediger V., Saatçılar R., İnan S., Cankurtaranlar A., Dikbaş A., Baş M.  
Geophysical Journal International, vol.185, pp.93-105, 2011 (Journal Indexed in SCI Expanded)
- **Relationship Between Organic Matter, Sulphur and Phosphate Contents in Upper Cretaceous Marine Carbonates (Karaboğaz Formation, SE Turkey): Implications for Early Oil Generation**  
İnan S., Ugur F. A. , Inan T., Yalcin N., Mann U.  
Journal Of Petroleum Geology, vol.33, pp.319-337, 2010 (Journal Indexed in SCI Expanded)
- **Multi-disciplinary earthquake researches in Western Turkey: Hints to select sites to study geochemical transients associated to seismicity**  
Inan S., Ertekin K., Seyis C., Şimşek Ş., Kulak F., Dikbaş A., Tan O., Ergintav S., Çakmak R., Yörük A., et al.  
Acta Geophysica, vol.58, pp.767-813, 2010 (Journal Indexed in SCI)
- **An ion chromatography method for the determination of major anions in geothermal water samples**  
Zeyrek M., Ertekin K., Kacmaz S., Seyis C., Inan S.  
Geostandards and Geoanalytical Research, vol.34, pp.67-77, 2010 (Journal Indexed in SCI)
- **Multi-disciplinary research on geo- and man-made hazards: Preface to the topical issue**  
Papadimitriou E. E. , İnan S.  
Acta Geophysica, vol.58, pp.717-718, 2010 (Journal Indexed in SCI)
- **Observation and removal of daily quasi-periodic components in soil radon data**  
Baykut S., Akgul T., Inan S., Seyis C.  
Radiation Measurements, vol.45, pp.872-879, 2010 (Journal Indexed in SCI Expanded)
- **Bala (Ankara) earthquakes: Implications for shallow crustal deformation in central Anatolian section of the Anatolian Platelet (Turkey) Bala (Ankara) depremleri: Anadolu Levhasının orta Anadolu kesiminde sığ kabuk deformasyonuna katkılar**  
Tan O., Cengiz Tapirdamaz M., Ergintav S., Inan S., İravul Y., Saatçılar R., Tüzel B., Tarancioğlu A., Karakisa S., Kartal R. F. , et al.  
Turkish Journal of Earth Sciences, vol.19, pp.449-471, 2010 (Journal Indexed in SCI)
- **Soil radon observations as possible earthquake precursors in Turkey**  
İnan S., Seyis C.  
Acta Geophysica, vol.58, pp.828-837, 2010 (Journal Indexed in SCI)
- **Ground and indoor radon measurements in a geothermal area**  
Seyis C., İnan S., Streil T.  
Acta Geophysica, vol.58, pp.939-946, 2010 (Journal Indexed in SCI)
- **Free gas and gas hydrates from the Sea of Marmara, Turkey Chemical and structural characterization**  
Bourry C., CHAZALLON B., CHARLOU J. L. , DONVAL J. P. , RUFFINE L., HENRY P., GELI L., Cagatay M. N. , İNAN S., MOREAU M.  
CHEMICAL GEOLOGY, vol.264, pp.197-206, 2009 (Journal Indexed in SCI)
- **Geochemical monitoring in the Marmara region (NW Turkey): A search for precursors of seismic activity**  
Inan S., AKGUEL T., SEYIS C., SAATCILAR R., BAYKUT S., ERGINTAV S., BAS M.  
JOURNAL OF GEOPHYSICAL RESEARCH-SOLID EARTH, vol.113, 2008 (Journal Indexed in SCI)
- **Characterization of oil generation and expulsion from coals and source rocks using diamond anvil cell pyrolysis**

Weng R., Huang W., Kuo C., Inan S.

Organic Geochemistry, vol.34, pp.771-787, 2003 (Journal Indexed in SCI)

- **Carboniferous coals of the Zonguldak basin (northwest Turkey): Implications for coalbed methane potential**

Yalçın M. N. , Inan S., Gürdal G., Mann U., Schaefer R. G.

AAPG Bulletin, vol.86, pp.1305-1328, 2002 (Journal Indexed in SCI)

- **A new Carboniferous coal/shale driven gas play in the Western Black Sea Region (Turkey)**

Yalçın M. N. , Inan S., Hoşgörmez H., Çetin S.

Marine and Petroleum Geology, vol.19, pp.1241-1256, 2002 (Journal Indexed in SCI)

- **Evaluation of petroleum generation and expulsion from a source rock by open and restricted system pyrolysis experiments. Part I. Extrapolation of experimentally-derived kinetic parameters to natural systems**

Inan S., Schenk H. J.

Journal of Analytical and Applied Pyrolysis, pp.213-228, 2001 (Journal Indexed in SCI)

- **Gaseous hydrocarbons generated during pyrolysis of petroleum source rocks using unconventional grain-size: Implications for natural gas composition**

Inan S.

Organic Geochemistry, vol.31, pp.1409-1418, 2000 (Journal Indexed in SCI)

- **Character of active faulting in the North Aegean Sea**

SAATÇILAR R., ERGİNTAV S., Demirbağ M. E. , İNAN S.

MARINE GEOLOGY, vol.160, pp.339-353, 1999 (Journal Indexed in SCI Expanded)

- **Deep petroleum occurrences in the Lower Kura Depression, South Caspian Basin, Azerbaijan: An organic geochemical and basin modeling study**

Inan S., Yalçın M. N. , Guliev I. S. , Kuliev K., Feizullayev A. A.

Marine and Petroleum Geology, vol.14, pp.731-762, 1997 (Journal Indexed in SCI)

## Articles Published in Other Journals

- **Post-glacial terraces of the marmara sea and water exchange periods**

Ediger V., Demirbag E., ERGİNTAV S., Inan S., SAATÇILAR R.

Bulletin of the Mineral Research and Exploration, vol.157, pp.39-57, 2018 (Journal Indexed in ESCI)

- **An environmentally-friendly integrated seismic imaging for coal exploration in the Miocene Soma Basin, Western Turkey**

SAATÇILAR R., Inan S., Cankurtaranlar A., Duygun F., Demirbag E., ERGİNTAV S., Yılmaz M., Toygar A. R. , Kosebalaban A., Yalcin M. N.

International Journal of Oil, Gas and Coal Technology, vol.7, pp.399-414, 2014 (Refereed Journals of Other Institutions)

- **Turkey makes major investment in earthquake research**

Inan S., Ergintav S., Saalçitar R., Tüzel B., İravul Y.

Eos, vol.88, pp.333-334, 2007 (Refereed Journals of Other Institutions)

## Books & Book Chapters

- **A Petroleum System and Basin Modeling Study of Northwest and East-Central Saudi Arabia: Effect of Burial History and Adjacent Rock Lithology on the Gas Potential of the Silurian Shales**

Inan S., Hakami A., Abuali M.

in: Petroleum Systems Analysis-Case Studies, M. AbuAli, Isabelle Moretti, Hege Nordgard Bolas, Editor, American Association for the Advancement of Science , Oklahoma, pp.1-35, 2017

## Refereed Congress / Symposium Publications in Proceedings

- **PRE-EARTHQUAKES, an FP7 project for integrating observations and knowledges on earthquake precursors: Preliminary results and strategy**  
Tramutoli V., İNAN S., JAKOWSKI N., PULINETS S., ROMANOV A., FILIZZOLA C., SHAGIMURATOV I., PERGOLA N., GENZANO N., SERIO C., et al.  
2012 32nd IEEE International Geoscience and Remote Sensing Symposium, IGARSS 2012, Munich, Germany, 22 - 27 July 2012, pp.3536-3539
- **Seismic activity related anomaly detection in Soil Radon Emanation**  
BAYKUT S., AKGÜL T., İNAN S.  
Signal Processing Conference, 2011 19th European, Barcelona, Spain, 29 August - 02 September 2011, pp.908-912
- **Coalbed gas potential in the Miocene Soma Basin (Western Turkey)**  
İnan S., Yalçın M. N. , Okandan E., Yürüm Y., Saatçılar R., Yılmaz M., Toygar A. R. , Kösebalaban A., Anaç S., Duran H., et al.  
27th Annual International Pittsburgh Coal Conference 2010, PCC 2010, İstanbul, Turkey, 11 October 2010, vol.2, pp.1034-1035
- **Underground coal determination by integrated (Reflection & WVSP) seismic in the miocene Soma Basin (Western Turkey)**  
Saatçılar R., Yılmaz M., Toygar A. R. , İnan S., Kösebalaban A., Anaç S., Duran H., Onbaşı M., Ersoy M., Atasayar M., et al.  
27th Annual International Pittsburgh Coal Conference 2010, PCC 2010, İstanbul, Turkey, 11 October 2010, vol.2, pp.1036-1037
- **Biogasification of soma lignite (A preliminary study)**  
Baysala M., İnan S., Yürüm Y.  
27th Annual International Pittsburgh Coal Conference 2010, PCC 2010, İstanbul, Turkey, 11 October 2010, vol.3, pp.2447-2451
- **Analysis of 1/f noise characteristics of geo-signals**  
Akgül T., Baykut S., İnan S., Ergintav S.  
8th European Conference on Noise Control 2009, EURONOISE 2009, Edinburgh, United Kingdom, 26 - 28 October 2009, vol.31
- **Expulsion of oil from petroleum source rocks: Inferences from pyrolysis of samples of unconventional grain size**  
İnan S., Yalçın M. N. , Mann U.  
Proceedings of the 1997 18th International Meeting on Organic Geochemistry. Part 1 (of 2), Maastricht, Netherlands, 22 - 26 September 1997, vol.29, pp.45-61

## Patent

İnan S., Pyrolysis to determine hydrocarbon expulsion efficiency of hydrocarbon source rock, Patent, CHAPTER B Implementation of Operations; Transport, Initial Registration, 2020

İnan S., Decontaminating rock samples by thermovaporization, Patent, CHAPTER B Implementation of Operations; Transport, Initial Registration, 2020

## Activities in Scientific Journals

Results in Geophysical Sciences (Elsevier), Editor, 2020 - Continues

ACTA GEOPHYSICA, Special Issue Editor, 2009 - 2010

Organic Geochemistry, Special Issue Editor, 1999 - 2000

## Memberships / Tasks in Scientific Organizations

Türkiye Petrol Jeologları Derneği (TPJD), Principal Member, 1996 - Continues, Turkey

American Association of Petroleum Geologists (AAPG), Principal Member, 1989 - Continues, United States Of America  
Society of Petroleum Engineers (SPE), Principal Member, 2014 - 2019, United States Of America  
Dhahran Geosciences Society (DGS), Principal Member, 2013 - 2019, Saudi Arabia  
European Association of Organic Geochemists (EAOG), Principal Member, 1999 - 2012, British Virgin Islands  
International Geohazards Research Society, Chairman, 2005 - 2010, Germany

## Scientific Refereeing

MARINE AND PETROLEUM GEOLOGY, SCI Journal, July 2020  
INTERNATIONAL JOURNAL OF COAL GEOLOGY, SCI Journal, May 2020  
ORGANIC GEOCHEMISTRY, SCI Journal, March 2020  
JOURNAL OF PETROLEUM SCIENCE AND ENGINEERING, SCI Journal, January 2020

## Tasks In Event Organizations

İnan S., The Source Rocks of the Middle East (AAPG GTW), Workshop Organization, Abu Dhabi, United Arab Emirates, Ocak 2016  
İnan S., Hydrocarbon Trapping Mechanisms in the Middle East (AAPG GTW), Workshop Organization, İstanbul, Turkey, Aralık 2012  
İnan S., International GeoHazards Research Society (IGRS) Symposium , Scientific Congress, İstanbul, Turkey, Mart 2009  
İnan S., 19th International Meeting of Organic Geochemistry (IMOG), Scientific Congress, İstanbul, Turkey, Eylül 1999

## Citations

Total Citations (WOS):484  
h-index (WOS):13

## Scholarships

Ph.D. Fellowship, Other International Organizations, 1989 - 1993  
ABD'de lisansustu egitim bursu, Other Government Agencies, 1986 - 1989

## Awards

İnan S., CEO Research Excellence Award, Saudi Arabian Oil Company (Saudi Aramco), February 2017  
İnan S., En Basarili Arastirma Projesi Odulu, Tubitak Marmara Arastirma Merkezi, May 2010