

Application of bulk property based correlations to phenolic moieties rich oil

Oja, Vahur; Baird, Zachariah Steven; Järvik, Oliver 28th European Symposium on Applied Thermodynamics ESAT 2015 : June 11-14, 2015, Athens, Greece : book of abstracts 2015 / p. 140

Application of undefined mixture correlations and FTIR-PLS method to predict thermodynamic properties of hydroxyl group rich Kukersite oil shale derived "synthetic oils"

Baird, Zachariah Steven; Järvik, Oliver; Oja, Vahur X Iberoamerican Conference on Phase Equilibria and Fluid Properties for Process Design : June 28-July 1, 2015, Alicante (Spain) : book of abstracts 2015 / [2] p

Comparison of the most likely low-emission electricity production systems in Estonia

Baird, Zachariah Steven; Nešumajev, Dmitri; Järvik, Oliver; Powell, Kody M. PLoS ONE 2021 / e0261780, 37 p

<https://doi.org/10.1371/journal.pone.0261780> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Composition of gas from pyrolysis of Estonian oil shale with various sweep gases

Mozaffari, Sepehr; Järvik, Oliver; Baird, Zachariah Steven Oil shale 2021 / p. 215-227 : ill <https://doi.org/10.3176/oil.2021.3.03>

[Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

The composition of kukersite shale oil

Baird, Zachariah Steven; Oja, Vahur; Järvik, Oliver Oil shale 2023 / p. 25-43 : ill <https://doi.org/10.3176/oil.2023.1.02>

https://artiklid.elnet.ee/record=b2903562*est [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Densities, viscosities, and thermal conductivities of the ionic liquid 7-Methyl-1,5,7-triazabicyclo[4.4.0]dec-5-enium acetate and its mixtures with water

Baird, Zachariah Steven; Uusi-Kyyny, Petri; Dahlberg, Artur; Cederkrantz, Daniel; Alopaeus, Ville International journal of thermophysics 2020 / art. 160, 21 p. : ill <https://doi.org/10.1007/s10765-020-02742-4>

Desulfurization, denitrogenation and deoxygenation of shale oil

Baird, Zachariah Steven; Rang, Heino; Oja, Vahur Oil shale 2021 / p. 137-154 : ill <https://doi.org/10.3176/oil.2021.2.03> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Distribution of hydroxyl groups in kukersite shale oil : quantitative determination using Fourier transform infrared (FT-IR) spectroscopy

Baird, Zachariah Steven; Oja, Vahur; Järvik, Oliver Applied spectroscopy 2015 / p. 555-562 <https://doi.org/10.1366/14-07705>

[Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Effect of different sweep gases on sulfur behavior during pyrolysis of kukersite oil shale = Pürolüüsi keskkonna mõju väävlü käitumisele kukersiitse põlevkivi pürolüüsil

Mozaffari, Sepehr 2022 <https://doi.org/10.23658/taltech.60/2022> <https://digikogu.taltech.ee/et/Item/cf50933f-1f46-4cdb-b83e-f97cf2a962ca>

https://www.eester.ee/record=b5524905*est

Effect of N₂ and CO₂ on shale oil from pyrolysis of Estonian oil shale

Mozaffari, Sepehr; Järvik, Oliver; Baird, Zachariah Steven International journal of coal preparation and utilization 2022 / p. 2908-

2922 <https://doi.org/10.1080/19392699.2021.1914025> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Heat of combustion of oxygen containing shale oil

Järvik, Oliver; Oja, Vahur; Baird, Zachariah Steven; Yanchilin, Alexey Chemical engineering and biochemical engineering for a new sustainable process industry in Europe : ECCE10+ECAB3+EPIC5 : September 27th - October 1st 2015, Nice, France : abstract book 2015 / p. 1464

Hydrogen solubility of shale oil containing polar phenolic compounds

Baird, Zachariah Steven; Uusi-Kyyny, Petri; Oja, Vahur; Alopaeus, Ville Industrial and engineering chemistry research 2017 / p.

8738-8747 : ill <https://doi.org/10.1021/acs.iecr.7b00966> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Mineral and heavy metal composition of oil shale ash from oxyfuel combustion

Konist, Alar; Nešumajev, Dmitri; Baird, Zachariah Steven; Anthony, Edward J.; Maasikmets, Marek; Järvik, Oliver ACS Omega

2020 / p. 32498-32506 : ill <https://doi.org/10.1021/acsomega.0c04466> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Multivariate models based on infrared spectra as a substitute for oil property correlations to predict thermodynamic properties : evaluated on the basis of the narrow-boiling fractions of Kukersite retort oil

Baird, Zachariah Steven; Oja, Vahur Oil shale 2022 / p. 20-36 <https://doi.org/10.3176/oil.2022.1.02> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Phase equilibria of complex mixture in the context of unconventional fuel resources = Komplekssete segude faaside

tasakaalud mittekonventsionaalsete energiaallikate tehnoloogiates

Mozaffari, Parsa 2022 <https://doi.org/10.23658/taltech.61/2022> <https://digikogu.taltech.ee/et/Item/44cfd577-8d43-4408-9542-7fe74ce90e35>
https://www.ester.ee/record=b5524952*est

Physical and thermodynamic properties of kukersite pyrolysis shale oil : literature overview

Oja, Vahur; Rooleht, Ruth; Baird, Zachariah Steven Oil shale 2016 / p. 184-197 : ill <https://doi.org/10.3176/oil.2016.2.06>

https://artiklid.elnet.ee/record=b2778471*est [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Physical and thermodynamic properties of phenol-rich oil from oil shale : application of correlations based on bulk properties

Oja, Vahur; Järvi, Oliver; Baird, Zachariah Steven; Rannaveski, Rivo PetroPhase 2016 : Elsinore, Denmark, 19-23 June 2016

2016 / p. 99 http://petrophase2016.com/wp-content/uploads/2016/06/PetroPhase2016_ConferenceBook.pdf

Physical properties of 7-Methyl-1,5,7-triazabicyclo[4.4.0]dec-5-ene (mTBD)

Baird, Zachariah Steven; Dahlberg, Artur; Uusi-Kyyny, Petri; Osmanbegovic, Nahla; Witos, Joanna; Helminen, Jussi; Cederkrantz, Daniel; Hyväri, Paulus; Alopaeus, Ville; Kilpeläinen, Ilkka; Wiedmer, Susanne K.; Sixta, Herbert; Uusi-Kyyny, Petri International journal of thermophysics 2019 / art. 71, 23 p. : ill <https://doi.org/10.1007/s10765-019-2540-2>

Predicting fuel properties from infrared spectra = Kütuse omaduste hindamine infrapunaspektrilt

Baird, Zachariah Steven 2017 <https://digi.lib.ttu.ee/i/?8530> https://www.ester.ee/record=b4689447*est

Predicting fuel properties using chemometrics : a review and an extension to temperature dependent physical properties by using infrared spectroscopy to predict density

Baird, Zachariah Steven; Oja, Vahur Chemometrics and intelligent laboratory systems 2016 / p. 41-47 : ill

<https://doi.org/10.1016/j.chemolab.2016.08.004> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Prediction of pour points of kukersite shale oil : influence of phenols on pour point

Baird, Zachariah Steven; Oja, Vahur; Järvi, Oliver Chemical engineering and biochemical engineering for a new sustainable process industry in Europe : ECCE10+ECAB3+EPIC5 : September 27th - October 1st 2015, Nice, France : abstract book 2015 / p. 1466

A predictive approach towards using PC-SAFT for modeling the properties of shale oil

Mozaffari, Parsa; Baird, Zachariah Steven; Järvi, Oliver Materials 2022 / art. 4221 <https://doi.org/10.3390/ma15124221> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Properties of kukersite shale oil

Järvi, Oliver; Baird, Zachariah Steven; Rannaveski, Rivo; Oja, Vahur Oil shale 2021 / p. 265-294

<https://doi.org/10.3176/oil.2021.4.01> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Sulfur in kukersite shale oil : its distribution in shale oil fractions and the effect of gaseous environment

Mozaffari, Sepehr; Baird, Zachariah Steven; Järvi, Oliver Journal of thermal analysis and calorimetry 2022 / p. 11601-11610

<https://doi.org/10.1007/s10973-022-11359-8> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Surface area of oil shale and its solid pyrolysis products depending on the particle size

Pikkor, Heliis; Maaten, Birgit; Baird, Zachariah Steven; Järvi, Oliver; Konist, Alar; Lees, Heidi Chemical engineering

transactions 2020 / p. 961-966 <https://doi.org/0.3303/CET2081161> [Journal metrics at Scopus](#) [Article at Scopus](#)

Surface tensions of phenolic moieties rich narrow boiling range distillation cuts from kukersite oil shale based crude oil

Albert, Tiina; Baird, Zachariah Steven; Oja, Vahur ECTP2014 - 20th European Conference on Thermophysical Properties : Porto, Portugal, August 31st-September 4th 2014 : abstracts 2014 / [1] p

Zachariah Steven Baird: põlevkivielektri jaamad on ohtlikumad kui tuumajaamad [Võrguväljaanne]

Baird, Zachariah Steven postimees.ee 2022 "[Zachariah Steven Baird: põlevkivielektri jaamad on ohtlikumad kui tuumajaamad](#) "

A technical analysis of oil shale firing power units retrofitting for carbon capture and storage (CCS)

Konist, Alar; Järvi, Oliver; Baird, Zachariah Steven; Nešumajev, Dmitri Proceedings of the 15th Greenhouse Gas Control Technologies Conference 15-18 March 2021 2021 / 7 p <https://doi.org/10.2139/ssrn.3819278>

Temperature and pressure dependence of density of a shale oil and derived thermodynamic properties

Baird, Zachariah Steven; Uusi-Kyyny, Petri; Järvi, Oliver; Oja, Vahur; Alopaeus, Ville Industrial & engineering chemistry research 2018 / p. 5128-5135 <https://doi.org/10.1021/acs.iecr.7b05018> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#)

[Article at WOS](#)

Vapor pressures of narrow gasoline fractions of oil from industrial retorting of Kukersite oil shale

Mozaffari, Parsa; Baird, Zachariah Steven; Listak, Madis; Oja, Vahur Oil shale 2020 / p. 287-303 : tab

<https://doi.org/10.3176/oil.2020.4.03> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Vapor pressures of phenolic compounds found in pyrolysis oil

Mozaffari, Parsa; Järvik, Oliver; Baird, Zachariah Steven Journal of chemical & engineering data 2020 / p. 5559–5566

<https://doi.org/10.1021/acs.jced.0c00675> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Vapor pressures, densities, and PC-SAFT parameters for 11 bio-compounds

Baird, Zachariah Steven; Uusi-Kyyny, Petri; Pokki, Juha-Pekka; Pedegert, Emilie; Alopaeus, Ville International journal of thermophysics 2019 / art. 102, 36 p. : ill <https://doi.org/10.1007/s10765-019-2570-9>

Vapor–liquid equilibrium of ionic liquid 7-methyl-1,5,7-triazabicyclo[4.4.0]dec-5-enium acetate and its mixtures with water

Baird, Zachariah Steven; Uusi-Kyyny, Petri; Witos, Joanna; Rantamäki, Antti H.; Sixta, Herbert; Wiedmer, Susanne K.; Alopaeus, Ville Journal of Chemical & Engineering Data 2020 / p. 2405–2421 <https://doi.org/10.1021/acs.jced.9b01039>

Viscosity data for kukersite shale gasoline fractions

Baird, Zachariah Steven; Yanchilin, Alexey; Oja, Vahur; Järvik, Oliver Oil shale 2022 / p. 241–251

<https://doi.org/10.3176/oil.2022.4.01> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)