

Accelerated carbonation of Ca-rich fly ashes in non-cement applications = Kaltsiumirikka lendtuha kiirendatud karboniseerimine tsemendivabades rakendustes

Usta, Mustafa Cem 2023 <https://doi.org/10.23658/taltech.63/2023> <https://digikogu.taltech.ee/et/Item/5cd96499-8d75-44fa-9599-6d3eee32b244> https://www.ester.ee/record=b5645215*est

Applicability of the FB reactor of aspen plus for CFB oxy-fuel combustion of Estonian oil shale : gas and solid hydrodynamics

Yörük, Can Rüstü; Normann, F.; Filip, J.; Trikkel, Andres; Kuusik, Rein, keemik Proceedings of the 22nd International Conference on Fluidized Bed Conversion : Turku, Finland, June 14-17, 2015. Vol. 1 2015 / p. 150-159

Application of thermal analysis techniques for studying the possibilities of utilization of oil shale ashes formed at electricity production in Estonia

Kaljuvee, Tiit; Uibu, Mai; Einard, Marve; Yörük, Can Rüstü; Trikkel, Andres; Kuusik, Rein, keemik 5th Central and Eastern European Conference on Thermal Analysis and Calorimetry & 14th Mediterranean Conference on Calorimetry and Thermal Analysis, 27-30 August 2019, Roma, Italy: CEEC-TAC5 & Medicta2019 : book of abstracts 2019 / p. 47 <http://www.ceec-tac.org/download.php?file=/download/BoA%20CEEC-TAC5%20Medicta2019.pdf>

Aqueous mineral carbonation of oil shale mine waste (limestone) : a feasibility study to develop a CO2 capture sorbent

Puthiya Veetil, Sanoop Kumar; Rebane, Kaarel; Yörük, Can Rüstü; Lopp, Margus; Trikkel, Andres; Hitch, Michael William Energy 2021 / art. 119895 <https://doi.org/10.1016/j.energy.2021.119895> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Ash characterisation formed under different oxy-fuel circulating fluidized bed conditions

Baqain, Mais Hanna Suleiman; Yörük, Can Rüstü; Nešumajev, Dmitri; Järvik, Oliver; Konist, Alar Fuel 2023 / art. 127244 <https://doi.org/10.1016/j.fuel.2022.127244> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Carbonation and leaching behaviors of cement-free monoliths based on high-sulfur fly ashes with the incorporation of amorphous calcium aluminate

Usta, Mustafa Cem; Yörük, Can Rüstü; Uibu, Mai; Traksmäa, Rainer; Hain, Tiina; Gregor, Andre; Trikkel, Andres ACS omega 2023 / p. 29543–29557 : ill <https://doi.org/10.1021/acsomega.3c03286> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

ClimMIT - Climate change mitigation with CCS and CCU technologies

Uibu, Mai; Siirde, Andres; Järvik, Oliver; Trikkel, Andres; Yörük, Can Rüstü; Nurk, Gunnar; Kirsimäe, Kalle; **Hazak, Aaro; Konist, Alar** Proceedings of the 15th Greenhouse Gas Control Technologies Conference 15-18 March 2021 2021 / 9 p <https://ssrn.com/abstract=3812288> <https://doi.org/10.2139/ssrn.3812288>

CO2 curing of Ca-rich fly ashes to produce cement-free building materials

Usta, Mustafa Cem; Yörük, Can Rüstü; Uibu, Mai; Hain, Tiina; Gregor, Andre; Trikkel, Andres Minerals 2022 / art. 513, 24 p. : ill <https://doi.org/10.3390/min12050513> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

CO2 mineralization by burnt oil shale and cement by pass dust effect of operating temperature and pre-treatment

Usta, Mustafa Cem; Yörük, Can Rüstü; Uibu, Mai; Kaljuvee, Tiit; Trikkel, Andres GSFMT Scientific Conference 2020 : Tallinn, February 4-5, 2020 : abstracts 2020 / p. 87 <http://fntdk.ut.ee/wp-content/uploads/2020/01/GSFMT2020.pdf>

CO2 mineralization by burnt oil shale and cement bypass dust : effect of operating temperature and pre-treatment

Yörük, Can Rüstü; Uibu, Mai; Usta, Mustafa Cem; Kaljuvee, Tiit; Trikkel, Andres Journal of thermal analysis and calorimetry 2020 / p. 991–999 : ill <https://doi.org/10.1007/s10973-020-09349-9> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

CO2 mineralization by burnt oil shale and cement bypass dust: effect of operating temperature and pre-treatment

Yörük, Can Rüstü; Uibu, Mai; Usta, Mustafa Cem; Kaljuvee, Tiit; Trikkel, Andres 2nd Journal of Thermal Analysis and Calorimetry Conference, Budapest, June 18–21, 2019 : book of abstracts 2019 / p. 501 <https://jtac-jtacc.akcongress.com/>

Correction to: CO2 mineralization by burnt oil shale and cement bypass dust: effect of operating temperature and pre-treatment (Journal of Thermal Analysis and Calorimetry, (2020), 142, 2, (991-999), 10.1007/s10973-020-09349-9)

Yörük, Can Rüstü; Uibu, Mai; Usta, Mustafa Cem; Kaljuvee, Tiit; Trikkel, Andres Journal of Thermal Analysis and Calorimetry 2020 / p. 1001 <https://doi.org/10.1007/s10973-020-09973-5> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Developing mineral foam blocks from oil shale byproducts through accelerated carbonation

Thomas, Adheena; Yörük, Can Rüstü; Usta, Mustafa Cem; Pantšenko, Nata-Ly; Hain, Tiina; Uibu, Mai; Trikkel, Andres ACS omega 2025 / p. 47051–47064 <https://doi.org/10.1021/acsomega.5c05438>

Effect of process parameters on strength and carbonation of engineered building materials by calcium rich alkali wastes

Usta, Mustafa Cem; Yörük, Can Rüstü; Gregor, Andre; Hain, Tiina; Uibu, Mai; Trikkel, Andres GSFMT Scientific Conference

Enhanced sustainability of aerated building blocks: Utilization of accelerated carbonation and oil shale ash in cement composites

Thomas, Adheena; Yörük, Can Rüstü; Pantšenko, Nata-Ly; Hain, Tiina; Uibu, Mai; Trikkel, Andres Book of abstracts of 2nd Central and Eastern European Conference on Physical Chemistry & Material Science (CEEPCMS2) 2024 / p. 35-36
<https://doi.org/10.5755/e01.9786090218693>

Evaluation of new applications of oil shale ashes in building materials

Usta, Mustafa Cem; Yörük, Can Rüstü; Hain, Tiina; Paaver, Peeter; Snellings, Ruben; Rozov, Eduard; Gregor, Andre; Kuusik, Rein, keemik; Trikkel, Andres; Uibu, Mai Minerals 2020 / art. 765, 19 p. : ill <https://doi.org/10.3390/min10090765> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Experimental and modeling studies of oil shale oxy-fuel combustion

Yörük, Can Rüstü; Meriste, Tõnis International Symposium "Oil shale 100 years" : Estonia, Sept. 20-23, 2016 : [abstracts] 2016 / p. 22-23

Experimental and modeling studies of oil shale oxy-fuel combustion = Põlevkivi hapnikus põletamise eksperimentaalne uurimine ja modelleerimine

Yörük, Can Rüstü 2016 http://www.ester.ee/record=b4619911*est

Industrial sustainable fabrication, SEM characterization, mechanical testing, ANOVA analysis of PP-PETG recycled composites : artificial intelligence and deep learning studies for nuclear shielding applications

Hussain, Abrar; Goljandin, Dmitri; Podgurski, Vitali; Yörük, Can Rüstü; Sergejev, Fjodor; Kübarsepp, Jakob; Maurya, Himanshu Singh; Rahmani Ahranjani, Ramin European polymer journal 2024 / art. 113082
<https://doi.org/10.1016/j.eurpolymj.2024.113082> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Kinetics of oil shale thermo-oxidation under oxy-fuel conditions

Yörük, Can Rüstü; Meriste, Tõnis; Trikkel, Andres; Kuusik, Rein, keemik 7th Trondheim Conference on CO₂ Capture, Transport and Storage, TCCS-7 : Trondheim, Norway, June 4-6, 2013 : [abstracts] 2013 / [2] p. : ill

Kliimamuutuste leevendamine läbi CCS JA CCU tehnoloogiate (ClimMit) : lõpparuanne

Siirde, Andres; Järvik, Oliver; Nešumajev, Dmitri; Gušča, Julija; Uibu, Mai; Trikkel, Andres; Pihu, Tõnu; Konist, Alar; Maaten, Birgit; Liira, Martin; Hazak, Aaro; Männasoo, Kadri; Sander, Priit; Kask, Kaia; Poltimäe, Helen; Yörük, Can Rüstü 2021

Lead and nitrogen co-doped multi-walled carbon nanotube electrocatalyst for oxygen reduction reaction

Zarmehri, Ehsan; Raudsepp, Ragle; Šmits, Krišjānis; Käämbre, Tanel; Šutka, Andris; Yörük, Can Rüstü; Zacs, Dzintars; Kruusenberg, Ivar Journal of The Electrochemical Society 2023 / art. 114505, 10 p. : ill <https://doi.org/10.1149/1945-7111/ad0072> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Mineral sequestration of CO₂ from Vernasca Ca-looping demo system : scale up to a pilot

Usta, Mustafa Cem; Uibu, Mai; Yörük, Can Rüstü; Tamm, Kadriann; Kuusik, Rein, keemik; Trikkel, Andres; Gastaldi, Daniela; Canonico, Fulvio Proceedings of the 15th Greenhouse Gas Control Technologies Conference 15-18 March 2021 2021 / 12 p.: ill
<https://ssrn.com/abstract=3812245> <https://doi.org/10.2139/ssrn.3812245>

Oxy-fuel combustion of Estonian oil shale : kinetics and modeling

Yörük, Can Rüstü; Meriste, Tõnis; Trikkel, Andres; Kuusik, Rein, keemik Energy procedia 2016 / p. 124-133 : ill
<https://doi.org/10.1016/j.egypro.2016.01.013> [Conference Proceedings at Scopus](#) [Article at Scopus](#) [Article at WOS](#)

Performance evaluation of flue gas cured calcium rich fly ash-based building blocks : [flash paper presentation]

Usta, Mustafa Cem; Adegbile, A. M.; Gregor, Andre; Paaver, Peeter; Hain, Tiina; Yörük, Can Rüstü; Uibu, Mai; Trikkel, Andres 17th International Conference on Environmental Science and Technology CEST2021, 1-4 September 2021, Athens, Greece 2021 / [flash paper presentation]

Physical-mechanical properties and morphology of filled low-density polypropylene: comparative study on calcium carbonate with oil shale and coal ashes

Krasnou, Illia; Nadeem, Faisal; Gregor, Andre; Yörük, Can Rüstü; Krumme, Andres Journal of Vinyl and Additive Technology 2022 / p. 94-103 : ill <https://doi.org/10.1002/vnl.21869> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Prediction of flue gas composition and comparative overall process evaluation for air and oxyfuel combustion of Estonian oil shale, using aspen plus process simulation

Yörük, Can Rüstü; Trikkel, Andres; Kuusik, Rein, keemik Energy & fuels 2016 / p. 5893-5900 : ill
<https://doi.org/10.1021/acs.energyfuels.6b00022> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Simplified model of oxy-combustion for Estonian oil shale

Yörük, Can Rüstü; Trikkel, Andres; Uibu, Mai; Kuusik, Rein, keemik TÜ ja TTÜ doktorikool "Funktsionaalsed materjalid ja tehnoloogiad" : 04.-05. märts 2014, Tartu 2014 / [1] p

Study of thermooxidation of oil shale samples and basics of processes for utilization of oil shale ashes

Kaljuvee, Tiit; Uibu, Mai; Yörük, Can Rüstü; Einard, Marve; Trikkel, Andres; Kuusik, Rein, keemik; Trass, Olev; Štubna, Igor; Hulan, Tomaš; Loide, Valli; Jefimova, Jekaterina Minerals 2021 / at. 193 <https://doi.org/10.3390/min11020193> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Sustainable co2-derived nanoscale carbon support to a platinum catalyst for oxygen reduction reaction

Najafli, Erkin; Ratso, Sander; Ivanov, Y.P.; Gatalo, M.; Pavko, L.; Yörük, Can Rüstü; Walke, Peter; Divitini, G.; Hodnik, N.; Kruusenberg, Ivar GSFMT Scientific Conference 2023 : Tartu, 23-24 May, 2023 : abstracts 2023 <https://fntdk.ut.ee/programm-2023/>

Sustainable co2-derived nanoscale carbon support to a platinum catalyst for oxygen reduction reaction

Najafli, Erkin; Ratso, Sander; Ivanov, Yuri P.; Gatalo, Matija; Pavko, Luka; Yörük, Can Rüstü; Walke, Peter; Divitini, Giorgio; Hodnik, Nejc; Kruusenberg, Ivar ACS Applied Nano Materials 2023 / p. 5772-5780 : ill <https://doi.org/10.1021/acsanm.3c00208> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

TG-FTIR analysis of oxidation kinetics of some solid fuels under oxy-fuel conditions

Meriste, Tõnis; Yörük, Can Rüstü; Trikkel, Andres; Kaljuvee, Tiit; Kuusik, Rein, keemik Journal of thermal analysis and calorimetry 2013 / p. 483-489 : ill <https://doi.org/10.1007/s10973-013-3063-x> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

TG-FTIR analysis of oxidation kinetics of some solid fuels under oxy-fuel conditions

Meriste, T.; Yörük, Can Rüstü; Trikkel, Andres; Kuusik, Rein, keemik ICTAC 15 - 15th International Congress on Thermal Analysis and Calorimetry : August 20-24, 2012, Osaka 2012 <https://link.springer.com/article/10.1007/s10973-013-3063-x>

Thermal activation and pozzolanic reactivity of Estonian clays for cementitious applications

Yörük, Can Rüstü; Adegbile, Ademola Michael; Tuisk, Tanel; Hain, Tiina; Uibu, Mai; Usta, Mustafa Cem; Trikkel, Andres JTACC+V4 2025 : 4th Journal of Thermal Analysis and Calorimetry Conference & 10th V4 (Joint Czech-Hungarian-Polish-Slovak) Thermoanalytical Conference : Book of Abstracts 2025 / p. 70 <https://static.akcongress.com/downloads/jtacc/jtacc2025/jtacc2025-boa.pdf>

Thermal analysis of oxy-combustion of Estonian oil shale : kinetics of process stages

Trikkel, Andres; Meriste, Tõnis; Yörük, Can Rüstü; Kuusik, Rein, keemik 3rd Central and Eastern European Conference on Thermal Analysis and Calorimetry, 25-28 August 2015, Ljubljana, Slovenia : book of abstracts 2015 / p. 59

Thermal-kinetic study of Estonian clays and calcium/sulphur-rich industrial by-product under varied calcination atmospheres

Adeomola, Michael Adegbile; Yörük, Can Rüstü; Patsenko, Nata-Ly; Uibu, Mai; Thomas, Adheena; Usta, Mustafa Cem; Trikkel, Andres JTACC+V4 2025 : 4th Journal of Thermal Analysis and Calorimetry Conference & 10th V4 (Joint Czech-Hungarian-Polish-Slovak) Thermoanalytical Conference : Book of Abstracts 2025 / p. 172-173 <https://static.akcongress.com/downloads/jtacc/jtacc2025/jtacc2025-boa.pdf>

Thermogravimetric analysis and process simulation of oxyfuel combustion of blended fuels including oil shale, semicoke, and biomass

Yörük, Can Rüstü; Meriste, Tõnis; Sener, Sener; Kuusik, Rein, keemik; Trikkel, Andres International journal of energy research 2018 / p. 2213-2224 : ill <https://doi.org/10.1002/er.4011> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Thermo-oxidation characteristics of oil shale and oil shale char under oxy-fuel combustion conditions

Yörük, Can Rüstü; Meriste, Tõnis; Trikkel, Andres; Kuusik, Rein, keemik ESTAC-11 : the 11th European Symposium on Thermal Analysis and Calorimetry : Dipoli Congress Center, Espoo, Finland, August 17-21, 2014 : abstracts 2014 / p. 102

Thermo-oxidation characteristics of oil shale and oil shale char under oxy-fuel combustion conditions

Yörük, Can Rüstü; Meriste, Tõnis; Trikkel, Andres; Kuusik, Rein, keemik Journal of thermal analysis and calorimetry 2015 / p. 509-516 : ill <https://doi.org/10.1007/s10973-015-4484-5> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)