

Publikatsioonid 2021

1.1. Teadusartiklid, mis on kajastatud Thomson Reuters Web of Science andmebaasis (v.a. Thomson Reuters Conference Proceedings Citation Index poolt refereeritud kogumikud) ja/või Euroopa Teadusfondi humanitaarteaduste loendi ERIH (European Reference Index of the Humanities) kategooriates INT1 ja INT2 ja/või andmebaasis Scopus (v.a. kogumikud);

Shalima, T.; Mishra, K. A.; Kaabel, S.; Ustrnül, L.; Bartkova, S.; Tõnsuaadu, K.; Heinmaa, I.; Aav, R. (2021). Cyclohexanohemicucurbit[8]uril Inclusion Complexes With Heterocycles and Selective Extraction of Sulfur Compounds From Water. *Frontiers in Chemistry*, 9. DOI: 10.3389/fchem.2021.786746.

Eensalu, J.S.; Tõnsuaadu, K.; Adamson, J.; Oja Acik, I.; Krunk, M. (2021). Thermal decomposition of tris(O-ethylthiocarbonato)-antimony(III) — a single source precursor for antimony sulfide thin films. *Journal of Thermal Analysis and Calorimetry*. DOI: 10.1007/s10973-021-10885-1.

Tõnsuaadu, K.; Kallas, J.; Kuusik, R.; Hacıalioglu-Erlenheim, G.; Trikk, A. (2021). A New Perspective on Fluorapatite Dissolution in Hydrochloric Acid: Thermodynamic Calculations and Experimental Study. *Inorganics*, 9 (8), 65–76. DOI: 10.3390/inorganics9080065.

Kaljuvee, Tiit; Uibu, Mai; Yörük, Can Rüstü; Einard, Marve; Trikk, Andres; Kuusik, Rein; Trass, Olev; Stubna, Igor; Hulan, Tomas; Loide, Valli; Jefimova, Jekaterina (2021). Study of Thermooxidation of Oil Shale Samples and Basics of Processes for Utilization of Oil Shale Ashes. *Minerals*, 11 (2). DOI: [10.3390/min11020193](https://doi.org/10.3390/min11020193).

Hulan, T.; Knapek, M.; Csaki, S.; Kusnir, J.; Smilauerova, J.; Dobron, P.; Chmelik, F.; Kaljuvee, T.; Uibu, M. (2021). The Formation of Microcracks in Water-Saturated Porous Ceramics During Freeze-Thaw Cycles Followed by Acoustic Emission. *Journal of Nondestructive Evaluation*, 40 (1), #13. DOI: 10.1007/s10921-020-00748-4.

Traksmäa, R.; Kulu, P.; Kaljuvee, T.; Gregor, A.; Goljandin, D. (2021). Thermal properties of calcium-aluminate based materials. *Proceedings of the Estonian Academy of Sciences*, 70 (4), 508–515. DOI: 10.3176/proc.2021.4.19.

Tamm, K.; Zadeh, Z.A.; Kuusik, R.; Kallas, J.; Yang, J.; Tõnsuaadu, K.; Trikk, A. (2021). Effect of flotation time and collector dosage on estonian phosphorite beneficiation. *Minerals*, 11 (2), 1–20. DOI: [10.3390/min11020114](https://doi.org/10.3390/min11020114).

Yang, X.; Tamm, K.; Piir, I.; Kuusik, R.; Trikk, A.; Tõnsuaadu, K. (2021). Evaluation of Estonian phosphate rock by flotation. *Minerals Engineering*, 171, 107127. DOI: 10.1016/j.mineng.2021.107127.

Vind, J.; Tamm, K. (2021). Review of the extraction of key metallic values from black shales in relation to their geological and mineralogical properties. *Minerals Engineering*, 174, #107271. DOI: 10.1016/j.mineng.2021.107271.

Krasnou, I.; Nadeem, F.; Gregor, A.; Yörük, C. R.; Krumme, A. (2021). Physical–mechanical properties and morphology of filled low-density polypropylene: Comparative study on calcium carbonate with oil shale and coal ashes. *Journal of Vinyl and Additive Technology*, 1–10. DOI: 10.1002/vnl.21869.

Uibu, Mai; Tamm, Kadriann; Viires, Regiina; Reinik, Janek; Somelar, Peeter; Raado, Lembi-Merike; Hain, Tiina; Kuusik, Rein; Triikkel, Andres (2021). The composition and properties of ash in the context of the modernisation of oil shale industry. *Oil Shale*, 38 (2), 155–176. DOI: 10.123456789.

Puthiya Veetil, S. K.; Rebane, K.; Yörük, C. R.; Lopp, M.; Triikkel, A.; Hitch, M. (2021). Aqueous mineral carbonation of oil shale mine waste (limestone): A feasibility study to develop a CO₂ capture sorbent. *Energy*, #119895. DOI: [10.1016/j.energy.2021.119895](https://doi.org/10.1016/j.energy.2021.119895).

Peikolainen, A.L.; Uibu, M.; Kozlova, J.; Mändar, H.; Tamm, A.; Aabloo, A. (2021). Carbon xerogel from 5-methylresorcinol-formaldehyde gel: The controllability of structural properties. *Carbon Trends*, 3. DOI: 10.1016/j.cartre.2021.100037. **TU, TTÜ**

1.2. Teadusartiklid teistes rahvusvahelistes teadusajakirjades, millel on registreeritud kood, rahvusvaheline toimetis, rahvusvahelise kolleegiumiga eelretsenseerimine, rahvusvaheline levik ning kättesaadavus ja avatus kaastöödele

Peikolainen, Anna-Liisa; Uibu, Mai; Kozlova, Jekaterina; Mändar, Hugo; Tamm, Aile; Aabloo, Alvo (2021). Carbon xerogel from 5-methylresorcinol-formaldehyde gel: The controllability of structural properties. *Carbon Trends*, 3, 100037. DOI: [10.1016/j.cartre.2021.100037](https://doi.org/10.1016/j.cartre.2021.100037). **TU; TTÜ inseneri teaduskond**

2.5. Projekti, tellitud teadustöö või analüüsi publitseeritud raport Tamm, K. (2021) Soolhappelise tehnoloogia rakendused Eesti fosforiidi töötlemiseks. <https://fond.egt.ee/fond/egt/9453>

Nurk, Gunnar; Loog, Mart; Valgepea, Kaspar; Mäeorg, Uno; Kollist, Hannes; Hazak, Aaro; Männasoo, Kadri; Sander, Priit; Kask, Kaia; Siirde, Andres; Järvik, Oliver; Nešumajev, Dmitri; Gušča, Jülija; Uibu, Mai; Triikkel, Andres; Pihu, Tõnu; Konist, Alar; Maaten, Birgit; Liira, Martin (2021). Kliimamuutuste leevendamine läbi CCS JA CCU tehnoloogiate (ClimMit). Projekti „Kliimamuutuste leevendamine CCS ja CCU tehnoloogiate abil“ lõpparuanne (1–66). **ETIS-st puudub EK alt**

3.1. Artiklid/peatükid lisas loetletud kirjastuste välja antud kogumikes (kaasa arvatud Thomson Reuters Book Citation Index, Thomson Reuters Conference Proceedings Citation Index, Scopus refereeritud kogumikud);

Uibu, Mai; Siirde, Andres; Järvik, Oliver; Triikkel, Andres; Yörük, Can Rüstü; Nurk, Gunnar; Kirsimäe, Kalle; Hazak, Aaro; Konist, Alar (2021). ClimMIT - Climate change mitigation with CCS and CCU technologies. *SSRN Electronic Journal*, 1–9. DOI: 10.2139/ssrn.3812288.

Kulu, P.; Goljandin, D.; Traksmäa, R.; Kaljuvee, T.; Gregor, A. (2021). Thermal properties of calcium-aluminate based materials. *Iop Conference Series: Materials Science and Engineering*, 1140, 012028. DOI: 10.1088/1757-899X/1140/1/012028.

Shogenova, A.; Shogenov, K.; Uibu, M.; Kuusik, R.; Simmer, K.; Canonico, F. (2021). Techno-economic modelling of the Baltic CCUS onshore scenario for the cement industry supported by CLEANER project. *15th International Conference on Greenhouse Gas Control Technologies, GHGT-15 15th 18th March 2021 Abu Dhabi, UAE*. Elsevier, SSRN, *Energy*, 1–13. **VFP17114NG, Geoloogia instituut ETIS-st puudub**

3.2 Artiklid/peatükid lisas mitte loetletud kirjastuste välja antud kogumikes

Usta, M. C.; Uibu, M.; Yörük, C. R.; Tamm, K.; Kuusik, R.; Trikkel, A.; Gastaldi, D.; Canonico, F. (2021). Mineral sequestration of CO₂ from Vernasca Ca-looping demo system: scale up to a pilot. SSRN Electronic Journal, 1–12. DOI: 10.2139/ssrn.3812245.

Ainsaar, L.; Menert, A.; Lust, E.; Tõnsuaadu, K.; Kirsimäe, K. (2021). Oleviku- ja tulevikumaavarade uuringud Eestis: RITA MAARE. Riigikogu Toimetised, 44, 69–78. <https://rito.riigikogu.ee/nr-44/>

3.5. Artiklid/ettekanded, mis on avaldatud kohalikes konverentsikogumikes

Tamm, K.; Zadeh, Z. A.; Yang, X. (2021). Froth Flotation Studies for Beneficiation of Estonian Phosphate Rock. In: XIV International MINERAL PROCESSING and RECYCLING CONFERENCE (130–135). IMPRC 2021, XIV International MINERAL PROCESSING and RECYCLING CONFERENCE, May 12–14, 2021, Belgrade, Serbia. University of Belgrade, Technical faculty in Bor Chamber of Commerce and Industry of Serbia.

5.1. Konverentsiteesid, mida kajastab Thomson Reuters Web of Science

Usta, M. C.; Adegbile, A. M.; Gregor, A.; Paaver, P.; Hain, T.; Yörük, C. R.; Uibu, M.; Trikkel, A. (2021). Performance evaluation of flue gas cured calcium rich fly ash based building blocks. 17th International Conference on Environmental Science and Technology CEST2021, 1–4 September 2021, Athens, Greece. Springer.

5.2. Konverentsiteesid, mis ei kuulu valdkonda 5.1.

Kuusik, R.; Uibu, M.; Trikkel, A. (2021). Mineral carbonation in TalTech: past, state of art and future prospects. Accelerated Carbonation for Environmental and Material Engineering (ACEME 2021) May 16–19, 2021 VIRTUAL. Tallinn University of Technology.

Usta, M. C.; Gregor, A.; Hain, T.; Yörük, C. R.; Uibu, M.; Trikkel, A. (2021). Storage and Use of CO₂ in Oil Shale Ash Based Light-Weight Building Materials. International Conference on Accelerated Carbonation for Environmental and Material Engineering (ACEME 2021) May 16–19, 2021 VIRTUAL.

Usta, M. C.; Uibu, M.; Yörük, C. R.; Tamm, K.; Kuusik, R.; Trikkel, A.; Gastaldi, D.; Canonico, F. (2021). Towards Construction of CO₂ Mineralization Pilot in Vernasca Cement Plant. International Conference on Accelerated Carbonation for Environmental and Material Engineering (ACEME 2021) May 16–19, 2021 VIRTUAL.

Tamm, K. (2021). Beneficiation studies of Estonian phosphate rock. CRU Phosphates 2021 Virtual Conference & Exhibition: CRU Phosphates 2021, Virtual, 23–25 March 2021. CRU.

Tamm, K.; Leet, K.; Sinisalu, L.; Kuusik, R.; Uibu, M. (2021). Production of Precipitated Calcium Carbonate on the Basis of Estonian Industrial Waste and Ammonium Solvents. International Conference on Accelerated Carbonation for Environmental and Material Engineering (ACEME 2021), May 16–19, 2021 | VIRTUAL. AIChE.

Peikolainen, Anna-Liisa; Uibu, Mai; Aabloo, Alvo (2021). Sol-gel Derived Carbon Microspheres by Continuous Ultrasonic Spray Pyrolysis. In: . 31st Conference of the European Society for Biomaterials, Fully Virtual, 05.–09. Sept. 2021. **TU, TTÜ inseneri teaduskond**