

Advancing green hydrogen production : synthesizing and analyzing nickel and iron micro-flower shaped electrocatalysts on Ni-mesh for alkaline water electrolysis

Jäger, Rutha; Valk, Peeter; Grozovski, Vitali; **Volobujeva, Olga**; Prits, Alise-Valentine; Maide, Martin; Küngas, Rainer; Lust, Enn; Nerut, Jaak 246th ECS Meeting PRiME 2024; Honolulu, Hawaii, USA; October 6-11, 2024 <https://doi.org/10.1149/MA2024-02422814mtgabs>

Bifunctional platinum-free mixed metal oxygen electrocatalysts based on naturally abundant peat

Teppor, Patrick; Jäger, Rutha; Härmas, Meelis; Aruväli, Jaan; **Volobujeva, Olga**; Koppel, Mirjam; Lust, Enn ECS Meeting Abstracts 2022 / p. 29-37 : ill <https://doi.org/10.1149/10807.0029ecst> [Journal metrics at Scopus](#) [Article at Scopus](#)

Carbon aerogel platinum-praseodymium oxide nanocatalyst for methanol oxidation in 0.5 M sulfuric acid : (digital presentation)

Prits, Alise-Valentine; Nerut, Jaak; Kasuk, Heili; **Koel, Mihkel**; Sepp, Silver; Valk, Peeter; Aruväli, Jaan; Koppel, Miriam; **Mikli, Valdek**; **Volobujeva, Olga**; Lust, Enn ECS transactions 2022 / art. 79 <https://doi.org/10.1149/10807.0079ecst> [Journal metrics at Scopus](#) [Article at Scopus](#)

Chemistry and materials science - high level learning via research and practical training

Meissner, Dieter; **Mellikov, Enn**; **Öpik, Andres**; Burk, Peeter; Lust, Enn 6th Eurovariety in Chemistry Education 2015 : Chemistry Education for Responsible Citizenship and Employability : June, 30-July, 2, 2015, Tartu, Estonia 2015 / p. 43-45

Comparison of carbon aerogel and carbide-derived carbon as electrode materials for non-aqueous supercapacitors with high performance

Laheäär, Ann; **Peikolainen, Anna-Liisa**; **Koel, Mihkel**; Jänes, Alar; Lust, Enn Journal of solid state electrochemistry 2012 / p. 2717-2722 : ill <https://link.springer.com/article/10.1007/s10008-012-1660-4>

Comparison of carbon aerogel and carbide-derived carbon as electrode materials for non-aqueous supercapacitors with high performance

Laheäär, Ann; **Peikolainen, Anna-Liisa**; **Koel, Mihkel**; Jänes, Alar; Lust, Enn The 63rd Annual Meeting of International Society of Electrochemistry : 19.-24.08.2012, Praha 2012 / Abstract #s04-068 <https://link.springer.com/article/10.1007/s10008-012-1660-4>

Development of novel hierarchically microporous-mesoporous carbon and carbon nanospheres based materials and PEMFC single cells

Lust, Enn; Sepp, Silver; Nerut, Jaak; **Taleb, Masoud** ECS transactions 2016 / p. 777-788 <http://dx.doi.org/10.1149/07514.0777ecst>

Development of novel hierarchically microporous-mesoporous carbon and carbon nanospheres based materials and PEMFC single cells

Lust, Enn; Sepp, Silver; Nerut, Jaak; **Taleb, Masoud** PRiME Meeting : MA2016-02, October 2-7, 2016, Honolulu, Hawaii 2016 / p. 2539 <http://ma.ecsdl.org/content/MA2016-02/38/2539.abstract?sid=3a2322bd-5e72-463a-b64a-1b02d671829b>

(Digital) Oxygen reduction reaction on waste tire derived carbon material and synthesized non-platinum group metal catalysts in alkaline solution

Laanemäe, Joel; Jäger, Rutha; Teppor, Patrick; **Volobujeva, Olga**; Lust, Enn ECS Meeting Abstracts 2022 / p. 39-47 : ill <https://doi.org/10.1149/10807.0039ecst> [Journal metrics at Scopus](#) [Article at Scopus](#)

Electroactive polymer actuators with carbon aerogel electrodes

Palmre, Viljar; Lust, Enn; Jänes, Alar; **Koel, Mihkel**; **Peikolainen, Anna-Liisa**; Torop, Janno; Johanson, Urmas; Aabloo, Alvo Journal of materials chemistry 2011 / p. 2577-2583 : ill <https://pubs.rsc.org/en/content/articlelanding/2011/jm/c0jm01729a>

Electrochemical methods to establish the surface roughness of solid surfaces

Lust, Enn; Jänes, A.; Miidla, P.; Sammelselg, V.; Lust, K. 23rd Estonian Chemistry Days : abstracts of scientific conference 1997 / p. 85

Elektrokeemilised meetodid tahkete pindade kareduse määramiseks

Lust, Enn; Jänes, A.; Miidla, P.; Sammelselg, V.; Lust, K. XXIII Eesti keemiapäevad : teaduskonverentsi ettekannete referaadid 1997 / lk. 76

Energy materials

Mellikov, Enn; **Öpik, Andres**; Lust, Enn; Jänes, Alar Research in Estonia : present and future 2011 / p. 120-145 : ill

Exploring different synthesis parameters for the preparation of metal-nitrogen-carbon type oxygen reduction catalysts

Teppor, Patrick; Jäger, Rutha; Härk, Eneli; Sepp, Silver; Kook, Mati; **Volobujeva, Olga**; Paiste, Päärn; Kochovski, Zdravko; Tallo, Indre; Lust, Enn Journal of the Electrochemical Society 2020 / art. 054513 <https://doi.org/10.1149/1945-7111/ab7093> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Highly active Fe-N/C oxygen electrocatalysts based on silicon carbide derived carbon

Teppor, Patrick; Jäger, Rutha; Hints, J.; **Volobujeva, Olga**; Valk, Peeter; Koppel, Miriam; Lust, Enn Polymer Electrolyte Fuel Cells & Electrolyzers 20 (PEFC & E 20) 2020 / p. 607 - 615 <https://doi.org/10.1149/09809.0607ecst> [Conference Proceedings at Scopus Article at Scopus](#)

Hydrogen post-treatment enhances the electrochemical activity of Pt-CeO₂/C catalysts

Nguyen, Huy Quí Vinh; Kasuk, Heili; Härmä, Meelis; Aruväli, Jaan; **Volobujeva, Olga**; Härk, Eneli; Kochovski, Zdravko; Lust, Enn; Nerut, Jaak 8th Baltic Electrochemistry Conference. Conference Abstract 2024 / 1 p. https://sisu.ut.ee/wp-content/uploads/sites/638/nguyen_huy_qui_vinh_.pdf

Ilmar Koppel 16.01.1940-08.01.2020 : in memoriam

Soomere, Tarmo; Lust, Enn Universitas Tartuensis : UT : Tartu Ülikooli ajakiri 2020 / lk. 44-45 : portr https://www.ester.ee/record=b2459950*est

Influence of A-site modifications on the properties of La_{0.21}Sr_{0.74}-xCa_xTi_{0.95}Fe_{0.05}O_{3-δ} based fuel electrode for solid oxide cell

Paydar, Sara; Kooser, Kuno; Möller, Priit; **Volobujeva, Olga**; Granroth, Sari; Lust, Enn; Nurk, Gunnar Journal of The Electrochemical Society 2023 / art. 054502, 10 p. : ill <https://doi.org/10.1149/1945-7111/acd084> [Journal metrics at Scopus Article at Scopus Journal metrics at WOS Article at WOS](#)

Influence of electrolyte scaffold microstructure and loading of MIEC material on the electrochemical performance of RSOC fuel electrode

Maide, Martin; Lillmaa, Kadi; Salvan, Laur Kristjan; Möller, Priit; **Uibu, Mai**; Lust, Enn; Nurk, Gunnar Fuel Cells 2018 / p. 789-799 <https://doi.org/10.1002/fuce.201800087> [Journal metrics at Scopus Article at Scopus Journal metrics at WOS Article at WOS](#)

Influence of electrolyte scaffold microstructure and loading of miec material on the electrochemical performance of r-soc fuel electrode [Online resource]

Maide, Martin; Lillmaa, Kadi; Salvan, Laur Kristjan; **Uibu, Mai**; Lust, Enn; Nurk, Gunnar Tartu Ülikooli ASTRA projekt PER ASPERA : Funktsionaalsed materjalid ja tehnoloogiad : [7-8 märtsil 2018, Tallinn : teesid] GSFMT Scientific Conference 2018 : Tallinn, March 7-8, 2018 : abstracts 2018 / 1 p <http://fmdk.ut.ee/teesid-2018/>

Influence of Ni concentration on electrochemical and crystallographic properties of La_{0.25}Sr_{0.25}Ca_{0.4}Ti_{1-x}Ni_xO_{3-δ} solid oxide fuel cell anode

Korjus, Ove; Möller, Priit; Kooser, Kuno; Käämbre, Tanel; **Volobujeva, Olga**; Nerut, Jaak; Kotkas, S.; Lust, Enn; Nurk, Gunnar Journal of Power Sources 2021 / Art. n.r 229739 <https://doi.org/10.1016/j.jpowsour.2021.229739> [Journal metrics at Scopus Article at Scopus Journal metrics at WOS Article at WOS](#)

Investigation of oxygen reduction on platinum nanoparticles deposited onto peat-derived carbon carrier

Lobjakas, Viljar; Nerut, Jaak; Kasuk, Heili; Adamson, Anu; Thomberg, Thomas; Aruväli, Jaan; Valk, Peeter; Teppor, Patrick; Koppel, Mirjam; **Mikli, Valdek**; **Volobujeva, Olga**; Lust, Enn ECS Meeting Abstracts 2022 / p. 49-58 : ill <https://doi.org/10.1149/10807.0049ecst> [Journal metrics at Scopus Article at Scopus](#)

A journey for the development of a highly active ptcec(cr₃c₂) catalyst: material selections, synthesis optimization and electrical measurements for methanol oxidation and oxygen reduction

Nguyen, Huy Quí Vinh; Nerut, Jaak; Kasuk, Heili; Thomberg, Thomas; Härmä, Meelis; Härmä, R.; Koppel, Miriam; Teppor, Patrick; Külaviir, Marian; Aruväli, Jaan; **Volobujeva, Olga**; Lust, Enn GSFMT Scientific Conference 2023 : Tartu, 23-24 May, 2023 : abstracts 2023 <https://fmdk.ut.ee/programm-2023/>

Key aspects of industrial fabrication of carbon based ionic capacitive laminates

Kaasik, Friedrich; Jürgens, M.; Lust, Enn; Aabloo, Alvo; Baranova, Inna; Basant, Martin Z.; Hantel, Moritz M.; Johanson, Urmas; Kiefer, Rudolf; **Koel, Mihkel**; Peikola, Anna-Liisa Future Frontiers : PhD Conference on Emerging Technologies : Book of Abstracts 2025 / p. 33 ; oral 22 https://tuit.ut.ee/sites/default/files/2025-05/PhD%20Conference%202025%20Book%20of%20Abstracts_pub3.pdf

A new curriculum in sustainable energetics in Estonia

Meissner, Dieter; **Mellikov, Enn**; **Õpik, Andres**; Koppel, Ilmar; Lust, Enn The journal of materials education 2009 / 1/2, p. 23-32

Oleviku- ja tulevikumaavarade uuringud Eestis : RITA MAARE

Ainsaar, Leho; Menert, Anne; Lust, Enn; **Tõnsuaadu, Kaia**; Kirsimäe, Kalle Riigikogu Toimetised 2021 / lk. 69–78 : ill https://www.ester.ee/record=b1361123*est <https://rito.riigikogu.ee/wordpress/wp-content/uploads/2021/12/RiTo-44.pdf>

Optimisation of the ethylene glycol reduction method for the synthesis of platinum-ceria-carbon materials as catalysts for the methanol oxidation reaction

Nguyen, Huy; Nerut, Jaak; Kasuk, Heili; Härmä, Meelis; Valk, Peeter; Romann, Tavo; Koppel, Miriam; Teppor, Patrick; Aruväli, Jaan; Korjus, Ove; **Volobujeva, Olga**; Lust, Enn Journal of solid state electrochemistry 2023 / p. 313–326 : ill <https://doi.org/10.1007/s10008-022-05326-4> [Journal metrics at Scopus Article at Scopus Journal metrics at WOS Article at WOS](#)

Optimization of La_{0.2}Sr_{0.7}- xCa xTi_{0.95}Fe_{0.05}O_{3-δ}fuel electrode stoichiometry for solid oxide fuel-cell application

Paydar, Sara; Kooser, Kuno; Möller, Priit; **Volobujeva, Olga**; Granroth, Sari; Lust, Enn; Nurk, Gunnar ACS Applied Energy Materials

Oxygen electroreduction on platinum nanoparticles activated electrodes deposited onto D-glucose derived carbon support in 0.1 M KOH

Taleb, Masoud; Nerut, Jaak; Tooming, Tauno; Thomberg, Thomas; Lust, Enn *Journal of The Electrochemical Society* 2016 / p. F1251-F1257 <https://doi.org/10.1149/2.1051610jes> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Oxygen electroreduction on platinum nanoparticles deposited onto D-glucose derived carbon

Taleb, Masoud; Nerut, Jaak; Tooming, Tauno; Thomberg, Thomas; Jänes, Alar; Lust, Enn *Journal of the Electrochemical Society* 2015 / p. F651 - F660 <https://doi.org/10.1149/2.0231507jes> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Peat as a carbon source for non-platinum group metal oxygen electrocatalysts and AEMFC cathodes

Teppor, Patrick; Jäger, Rutha; Paalo, Maarja; Adamson, Anu; Härmäs, Meelis; **Volobujeva, Olga**; Aruväli, Jaan; Palm, Rasmus; Lust, Enn *International Journal of Hydrogen Energy* 2022 / p. 16908 - 16920 <https://doi.org/10.1016/j.ijhydene.2022.03.199> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Peat-derived carbon-based non-platinum group metal type catalyst for oxygen reduction and evolution reactions

Teppor, Patrick; Jäger, Rutha; Paalo, Maarja; Palm, Rasmus; **Volobujeva, Olga**; Härk, Eneli; Kochovski, Zdravko; Romann, Tavo; Härmäs, R.; Aruväli, Jaan; Kikas, Arvo; Lust, Enn *Electrochemistry Communications* 2020 / art. 106700 <https://doi.org/10.1016/j.elecom.2020.106700> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Peat-derived carbon-based non-platinum group metal type catalyst for oxygen reduction and evolution reactions

Teppor, Patrick; Jäger, Rutha; Paalo, Madis; Palm, R.; **Volobujeva, Olga**; Härk, E.; Kochovski, Z.; Romann, Tavo; Härmäs, R.; Aruväli, J.; Kikas, A.; Lust, Enn *GSFMT Scientific Conference 2020 : Tallinn, February 4-5, 2020 : abstracts 2020* / p. 81 <http://fmdk.ut.ee/wp-content/uploads/2020/01/GSFMT2020.pdf>

Platinum-free oxygen electrocatalysts and alkaline fuel cell cathodes fabricated from peat

Teppor, Patrick; Jäger, Rutha; Paalo, Maarja; Härmäs, Meelis; Adamson, Anu; **Volobujeva, Olga**; Aruväli, Jaan; Palm, Rasmus; Lust, Enn *Graduate School of Functional Materials and Technology (GSFMT) Scientific Conference : abstracts 2022* / 61 l. [Graduate School of Functional Materials and Technology \(GSFMT\) Scientific Conference 2022](#)

Synthesis and characterization of cobalt and nitrogen co-doped peat-derived carbon catalysts for oxygen reduction in acidic media

Jäger, Rutha; Teppor, Patrick; Paalo, Maarja; Härmäs, Meelis; Adamson, Anu; **Volobujeva, Olga**; Härk, Eneli; Kochovski, Zdravko; Romann, Tavo; Härmäs, Riinu; Aruväli, Jaan; Kikas, Arvo; Lust, Enn *Catalysts* 2021 / art. 715 <https://doi.org/10.3390/catal11060715> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Teaching sustainable energetics

Meissner, Dieter; Burk, Peeter; Koppel, Ilmar; Lust, Enn; **Melikov, Enn**; **Õpik, Andres** *International Conference On Renewable Energy (INCORE 2016) : book of programme and abstract 2016* / p. 13

The utilization of platinum catalysts deposited on carbon support synthesized from coffee grounds in a polymer electrolyte membrane fuel cell

Simson, Sander; Nerut, Jaak; Härmäs, Meelis; Valk, Peeter; Teppor, Patrick; Palm, Rasmus; Koppel, Miriam; Aruväli, Jaan; Korjus, Ove; **Volobujeva, Olga**; Mansson, Martin; Lust, Enn *ECS Meeting Abstracts* 2023 / art. 2295 <https://doi.org/10.1149/MA2023-01382295mtgabs>

Waste tire derived carbon support for non-platinum-group metal catalyst materials for oxygen reduction reaction in alkaline medium

Laanemäe, Joel; Jäger, Rutha; Teppor, Patrick; **Volobujeva, Olga**; Lust, Enn *ECS Meeting Abstracts* 2023 / p. 2283-2283 <https://doi.org/10.1149/MA2023-01382283mtgabs>

Waste tire derived carbon support for non-platinum-group metal catalyst materials for oxygen reduction reaction in alkaline medium

Laanemäe, Joel; Jäger, Rutha; Teppor, Patrick; **Volobujeva, Olga**; Lust, Enn *ECS Transactions* 2023 / p. 63-72 <https://doi.org/10.1149/11105.0063ecst>

Ülevaade. Oleviku- ja tulevikumaavarade uuringud Eestis [Võrguväljaanne]

Ainsaar, Leho; Menert, Anne; Lust, Enn; **Tõnsuaadu, Kaia**; Kirsimäe, Kalle *err.ee* 2022 ["Ülevaade. Oleviku- ja tulevikumaavarade uuringud Eestis"](#)