

### **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>

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### **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>

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### **(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>

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### **Energy materials**

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### **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-CeO<sub>2</sub>/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](https://sisu.ut.ee/wp-content/uploads/sites/638/nguyen_huy_qui_vinh_.pdf)

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### **Influence of A-site modifications on the properties of La<sub>0.21</sub>Sr<sub>0.74</sub>-xCa<sub>x</sub>Ti<sub>0.95</sub>Fe<sub>0.05</sub>O<sub>3-δ</sub> 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]**

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### **Influence of Ni concentration on electrochemical and crystallographic properties of La<sub>0.25</sub>Sr<sub>0.25</sub>Ca<sub>0.4</sub>Ti<sub>1-x</sub>Ni<sub>x</sub>O<sub>3-δ</sub> 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**

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### **A new curriculum in sustainable energetics in Estonia**

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### **Oleviku- ja tulevikumaavarade uuringud Eestis : RITA MAARE**

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### **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<sub>0.2</sub>Sr<sub>0.7</sub>- xCa xTi<sub>0.95</sub>Fe<sub>0.05</sub>O<sub>3-δ</sub>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](#)

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

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

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### **Teaching sustainable energetics**

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

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