

### **Ag nanoparticles on mesoporous carbon support as cathode catalyst for anion exchange membrane fuel cell**

Linge, Jonas Mart; Erikson, Heiki; Mooste, Marek; Piirsoo, Helle-Mai; **Kaljuvee, Tiit**; Kikas, Arvo; Aruväli, Jaan; Kisand, Vambola; Tamm, Aile; Kannan, Arunachala Mada; Tammeveski, Kaido International Journal of Hydrogen Energy 2023 / p. 11058-11070 <https://doi.org/10.1016/j.ijhydene.2022.12.138> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

### **Bifunctional multi-metallic nitrogen-doped nanocarbon catalysts derived from 5-methylresorcinol**

Kisand, Kaarel; Sarapuu, Ave; Kikas, Arvo; Kisand, Vambola; Rähn, Mihkel; Treshchalov, Alexey; Käärik, Maike; Piirsoo, Helle-Mai; Aruväli, Jaan; **Paiste, Päärn** Electrochemistry communications 2021 / art. 106932 <https://doi.org/10.1016/j.elecom.2021.106932> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

### **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](#)

### **Bimetallic metal-organic-framework-derived porous cobalt manganese oxide bifunctional oxygen electrocatalyst**

Yusibova, Gulnara; Assafrei, Jürgen-Martin; **Ping, Kefeng**; Aruväli, Jaan; Paiste, Päärn; Käärik, M.; Leis, J.; Piirsoo, Helle-Mai; Tamm, Aile; **Starkov, Pavel** Journal of electroanalytical chemistry 2023 / art. 117161, 10 p.: ill <https://doi.org/10.1016/j.jelechem.2023.117161> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

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

Priis, 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](#)

### **Comparison of benzimidazole-derived iron triad M–N–C nanomaterials as trifunctional catalysts in alkaline and acidic media : [manuscript]**

**Alam, Mahboob**; **Ping, Kefeng**; **Danilson, Mati**; **Mikli, Valdek**; Käärik, Maike; Leis, Jaan; Aruväli, Jaan; Paiste, Päärn; Rähn, Mihkel; Sammelselg, Väino; Tammeveski, Kaido; Kramm, Ulrike; Kongi, Nadežda; **Starkov, Pavel** 2022

### **Electrospun carbon nanofibre-based catalysts prepared with Co and Fe phthalocyanine for oxygen reduction in acidic medium**

Muuli, Kaur; Mooste, Marek; Akula, Srinu; **Gudkova, Viktoria**; Otsus, Markus; Kikas, Arvo; Aruväli, Jaan; Treshchalov, Alexey; Kisand, Vambola; **Krumme, Andres** ChemElectroChem 2023 / art. e202300131, 12 p. : ill <https://doi.org/10.1002/celec.202300131> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

### **Fused hybrid linkers for metal–organic framework-derived bifunctional oxygen electrocatalysts**

**Ping, Kefeng**; Braschinsky, Alan; **Alam, Mahboob**; **Bhadoria, Rohit**; **Mikli, Valdek**; **Mere, Arvo**; Aruväli, Jaan; Paiste, Päärn; Vlassov, Sergei; Kook, Mati; Rähn, Mihkel; Sammelselg, Väino; Tammeveski, Kaido; Kongi, Nadežda; **Starkov, Pavel** ACS Applied Energy Materials 2020 / p. 152–157 : ill <https://doi.org/10.1021/acsaem.9b02039> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

### **Hydrogen post-treatment enhances the electrochemical activity of Pt-CeO<sub>2</sub>/C catalysts**

Nguyen, Huy Qui Vinh; Kasuk, Heili; Härmas, 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)

### **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](#)

### **Iron and cobalt containing electrospun carbon nanofibre-based cathode catalysts for anion exchange membrane fuel cell**

Sokka, Andri; Mooste, Marek; Käärik, Maike; **Gudkova, Viktoria**; Kozlova, Jekaterina; Kikas, Arvo; Kisand, Vambola; Treshchalov, Alexey; Tamm, Aile; Paiste, Päärn; Aruväli, Jaan; Leis, Jaan; **Krumme, Andres**; Holdcroft, Steven; Cavaliere, Sara; Jaouen, Frederic; Tammeveski, Kaido International Journal of Hydrogen Energy 2021 / p. 31275-31287 <https://doi.org/10.1016/j.ijhydene.2021.07.025> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

### **Iron, cobalt, and nickel phthalocyanines tri-doped electrospun carbon nanofibre-based catalyst for rechargeable zinc-air battery air electrode**

Muuli, Kaur; Rohit Kumar; Mooste, Marek; **Gudkova, Viktoria**; Treshchalov, Alexey; Piirsoo, Helle-Mai; Kikas, Arvo; Aruväli, Jaan; Kisand, Vambola; Tamm, Aile; **Krumme, Andres**; Moni, Prabu; Wilhelm, Michaela; Tammeveski, Kaido Materials 2023 / art. 4626 <https://doi.org/10.3390/ma16134626> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

### **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; Thomborg, Thomas; Härmäs, Meelis; Härmäs, 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/>

### **Mechanosynthesis of a bifunctional FeNi-N-C oxygen electrocatalyst via facile mixed-phase templating and preheating-pyrolysis**

Kosimov, Akmal; Yusibova, Gulnara; Wojsiat, Ivan Tito; Aruväli, Jaan; Käärik, Maike; Leis, Jaan; Paaver, Peeter; Vlassov, Sergei; Kikas, Arvo; Kisand, Vambola; Piirsoo, Helle-Mai; Kukli, Kaupo; Heinmaa, Ivo; **Kaljuvee, Tiit**; Kongi, Nadezda Journal of Materials Chemistry A 2023 / p. 335 - 342 <https://doi.org/10.1039/d3ta04580c> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

### **Multi-purpose heterogeneous catalyst material from an amorphous cobalt metal-organic framework**

**Ping, Kefeng; Alam, Mahboob; Kahnert, Sean Ray; Bhadoria, Rohit; Mere, Arvo; Mikli, Valdek**; Käärik, Maike; Aruväli, Jaan; Paiste, Päärm; Kikas, Arvo; Kisand, Vambola; **Järving, Ivar**; Leis, Jaan; Kongi, Nadežda; **Starkov, Pavel** Materials advances 2021 / p. 4009-4015 <https://doi.org/10.1039/D1MA00414J> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

### **Nickel and nitrogen-doped bifunctional ORR and HER electrocatalysts derived from CO<sub>2</sub>**

Rommel, Anna-Liis; Ratso, Sander; Divitini, Giorgio; **Danilson, Mati; Mikli, Valdek; Uibu, Mai**; Aruväli, Jaan; Kruusenberg, Ivar ACS Sustainable Chemistry and Engineering 2022 / p. 134-145 <https://doi.org/10.1021/acssuschemeng.1c05250> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

### **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; Härmäs, 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](#)

### **Optimizing post-treatment strategies for enhanced oxygen reduction/evolution activity in Co–N–C electrocatalyst**

Yusibova, Gulnara; Ping, Kefeng; Käärik, Maike; Leis, Jaan; Aruväli, Jaan; Šmits, Krišjānis; Käämbre, Tanel; Kisand, Vambola; **Karpichev, Yevgen**; Tammeveski, Kaido; Kongi, Nadezda International Journal of Hydrogen Energy 2024 / p. 398-406 <https://doi.org/10.1016/j.ijhydene.2024.07.388>

### **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**

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### **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 I. [Graduate School of Functional Materials and Technology \(GSFMT\) Scientific Conference 2022](#)

### **Shungite-derived graphene as a carbon support for bifunctional oxygen electrocatalysts**

Kazimova, Nargiz; **Ping, Kefeng; Alam, Mahboob; Danilson, Mati**; Merisalu, Maido; Aruväli, Jaan; Paiste, Päärm; Käärik, Maike; **Mikli, Valdek**; Leis, Jaan; Tammeveski, Kaido; **Starkov, Pavel**; Kongi, Nadežda Journal of catalysis 2021 / p. 178–187 <https://doi.org/10.1016/j.jcat.2021.01.004> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

### **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](#)

### **Transition-metal- and nitrogen-doped carbide-derived carbon/carbon nanotube composites as cathode catalysts for anion-exchange membrane fuel cells**

Lilloja, Jaana; Kibena-Põldsepp, Elo; Sarapuu, Ave; Douglin, John C.; Käärik, Maike; Kozlova, Jekaterina; **Paiste, Päärm**; Kikas, Arvo; Aruväli, Jaan; Leis, Jaan ACS catalysis 2021 / p. 1920-1931 <https://doi.org/10.1021/acscatal.0c03511> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

### **Unlocking the porosity of Fe–N–C catalysts using hydroxyapatite as a hard template en route to eco-friendly high-performance AEMFCs**

Teppor, Patrick; Jäger, Rutha; Koppel, Miriam; **Volobujeva, Olga**; Palm, Rasmus; Månsson, Martin; Härk, Eneli; Kochovski, Zdravko;

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**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>

**О превращениях структуры гидроксидфторапатита при нагревании**

**Põldme, Meeme**; Aruväli, Jaan; Utsal, Kalju Тезисы докладов Всесоюзной конференции "Фосфаты-87" 1987 / с. 595  
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