

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](#)

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

Directly electrospun electrodes for electrical double-layer capacitors from carbide-derived carbon

Malmberg, Siret; Arulepp, Mati; **Savest, Natalja; Tarasova, Elvira; Vassiljeva, Viktoria;** Krasnou, Illia; **Käärik, Maike; Mikli, Valdek; Krumme, Andres** Journal of electrostatics 2020 / art. 103396, 7 p. : ill <https://doi.org/10.1016/j.elstat.2019.103396> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Electroreduction of oxygen on carbide-derived carbon supported Pd catalysts

Lüsi, Madis; Erikson, Heiki; Sarapuu, Ave; Merisalu, Mado; Rähn, Mihkel; Treshchalov, Alexey; Paiste, Päärn; Käärik, Maike; Leis, Jaan; Sammelselg, Väino; **Kaljuvee, Tiit;** Tammeveski, Kaido GSFMT Scientific Conference 2020 : Tallinn, February 4-5, 2020 : abstracts 2020 / p. 57 : ill <https://fntdk.ut.ee/wp-content/uploads/2020/01/GSFMT2020.pdf> <https://doi.org/10.1002/celc.201902136> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Electrospun polyacrylonitrile-derived Co and Fe containing nanofibre catalysts for oxygen reduction reaction at the alkaline membrane fuel cell cathode

Mooste, Marek; Kibena-Pöldsepp, Elo; **Vassiljeva, Viktoria;** Kikas, Arvo; Käärik, Maike; Kozlova, Jekaterina; Kisand, Vambola; Külaviir, Marian; Cavaliere, S.; Leis, Jaan; **Krumme, Andres;** Sammelselg, Väino; Holdcroft, Steven; Tammeveski, Kaido ChemCatChem 2020 / p. 4568–4581 : ill <https://doi.org/10.1002/cctc.202000658> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

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 and cobalt phthalocyanine embedded electrospun carbon nanofiber-based catalysts for anion exchange membrane fuel cell cathode

Muuli, Kaur; Sokka, Andri; Mooste, Marek; Lilloja, Jaana; **Gudkova, Viktoria;** Käärik, Maike; Otsus, Markus; Kikas, Arvo; Kisand, Vambola; Tamm, Aile; Leis, Jaan; **Krumme, Andres** Journal of Catalysis 2023 / p. 117-130 <https://doi.org/10.1016/j.jcat.2023.04.008> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Iron triad-based bimetallic M–N–C nanomaterials as highly active bifunctional oxygen electrocatalysts

Alam, Mahboob; Ping, Kefeng; Danilson, Mati; Mikli, Valdek; Käärik, Maike; Leis, Jaan; Aruväli, Jaan; Paiste, Päärn; Rähn, Mihkel; Sammelselg, Väino; Tammeveski, Kaido; Haller, Steffen; Kramm, Ulrike Ingrid; **Starkov, Pavel;** Kongi, Nadezda ACS Applied Energy Materials 2024 / p. 4076 - 4087 <https://doi.org/10.1021/acsaem.4c00366> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

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, Päärn; 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](#)

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> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

The performance of fibrous CDC electrodes in aqueous and non-aqueous electrolytes

Malmberg, Siret; Arulepp, Mati; **Laanemets, Krista;** Käärik, Maike; Laheäär, Ann; **Tarasova, Elvira; Vassiljeva, Viktoria;** Krasnou, Illia; **Krumme, Andres** C : Journal of Carbon Research 2021 / art. 46 <https://doi.org/10.3390/c7020046>

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

Kazimova, Nargiz; **Ping, Kefeng**; **Alam, Mahboob**; **Danilson, Mati**; Merisalu, Mado; Aruväli, Jaan; Paiste, Päärn; 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](#)

Surveying iron–organic framework TAL-1-derived materials in ligandless heterogeneous oxidative catalytic transformations of alkylarenes

Ping, Kefeng; **Alam, Mahboob**; Käärik, Maike; Leis, Jaan; Kongi, Nadežda; **Järving, Ivar**; **Starkov, Pavel** Synlett 2019 / p. 1536–1540 : ill <https://doi.org/10.1055/s-0037-1611877> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Transition metal-containing nitrogen-doped nanocarbon catalysts derived from 5-methylresorcinol for anion exchange membrane fuel cell application

Kisand, Kaarel; Sarapuu, Ave; Danilian, Dmytro; Kikas, Arvo; Kisand, Vambola; Rähn, Mihkel; Treshchalov, Alexey; Käärik, Maike; Merisalu, Mado; **Paiste, Päärn** Journal of colloid and interface science 2021 / p. 263-274 <https://doi.org/10.1016/j.jcis.2020.09.114>
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Transition-metal- and nitrogen-doped carbide-derived carbon/carbon nanotube composites as cathode catalysts for anion-exchange membrane fuel cells

Lilloja, Jaana; Kibena-Pöldsepp, Elo; Sarapuu, Ave; Douglin, John C.; Käärik, Maike; Kozlova, Jekaterina; **Paiste, Päärn**; 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](#)