

A novel alumina – nanocarbon hybrid material

Ivanov, Roman; Anoshkin, Ilya; Nasibulin, Albert; **Hussainova, Irina**; Kauppinen, Esko NT13: Fourteenth International Conference on the Science and Applications of Nanotubes : 24-28 June, 2013, Espoo, Finland 2013 / p. 309

Alumina/graphene/Cu hybrids as highly selective sensor for simultaneous determination of epinephrine, acetaminophen and tryptophan in human urine

Taleb, Masoud; **Ivanov, Roman**; **Bereznev, Sergei**; Kazemi, Sayed Habib; **Hussainova, Irina** Journal of electroanalytical chemistry 2018 / p. 184-192 : ill <https://doi.org/10.1016/j.jelechem.2018.06.013> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Anisotropic thermal conduction in hierarchically structured composite using graphene-augmented alumina nanofibers

Saffarshamshirgar, Ali; **Ivanov, Roman**; Gasik, Michael; **Hussainova, Irina** XVI Conference and Exhibition Of The European Ceramic Society : abstract book 2019 / p. 167

Bifunctional oxygen electrocatalyst based on Fe, Co, and nitrogen co-doped graphene-coated alumina nanofibers for Zn-air battery air electrode

Mooste, Marek; Ahmed, Zubair; Kapitulsis, Pavels; **Ivanov, Roman**; Treshchalov, Alexey; Piirsoo, Helle-Mai; Kikas, Arvo; Kisand, Vambola; Kukli, Kaupo; **Hussainova, Irina**; Tammeveski, Kaido Applied Surface Science 2024 / art. 160024 <https://doi.org/10.1016/j.apsusc.2024.160024> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Biomechanical Features of Graphene-Augmented Inorganic Nanofibrous Scaffolds and Their Physical Interaction with Viruse

Gasik, Michael; **Ivanov, Roman**; Kazantseva, Jekaterina; Bilotsky, Yevgen; **Hussainova, Irina** Materials 2021 / art. 164 <https://doi.org/10.3390/ma14010164> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Chemical vapour deposition growth of graphene and carbon nanotubes on alumina

Ivanov, Roman; Anoshkin, Ilya; **Hussainova, Irina** TÜ ja TTÜ doktorikool "Funktsionaalsed materjalid ja tehnoloogiad" : 04.-05. märts 2014, Tartu 2014 / [1] p

Chemical vapour deposition of graphene coating onto ceramic nanofibers substrates and applications thereof = Grafeenpinde keemiline aursadestus keraamilistele nanokiududele ja nende kasutus

Ivanov, Roman 2017 <https://digi.lib.ttu.ee/i/?9128>

Combustion synthesis of silicon carbide by magnesio-carbothermic reduction of amorphous and crystalline silica

Kirakosyan, Hasmik; Nazaretyan, Khachik; Beglaryan, Hayk; Ivanov, Roman; **Hussainova, Irina**; **Aydinyan, Sofiya** Proceedings of the Estonian Academy of Sciences 2025 / p. 260-265 <https://doi.org/10.3176/proc.2025.2.31>

Dichroic absorption of aligned graphene-augmented inorganic nanofibers in the terahertz regime

Xenidis, Nikolaos; Przewłoka, Aleksandra; Stelmaszczyk, Kamil; Haras, Maciej; Smirnov, Serguei; Krajewska, Aleksandra; **Ivanov, Roman**; **Hussainova, Irina**; Oberhammer, Joachim; Skotnicki, Tomas; Mierczyk, Zygmunt; Lioubtchenko, Dmitri Applied materials today 2024 / art. 102245 <https://doi.org/10.1016/j.apmt.2024.102245>

Direct CVD growth of multi-layered graphene closed shells around alumina nanofibers

Ivanov, Roman; Mikli, Valdek; Kübarsepp, Jakob; **Hussainova, Irina** Engineering materials and tribology : selected, peer reviewed papers from the 24th International Baltic Conference on Engineering Materials & Tribology (BALTMATRIB & IFHTSE 2015), November 5-6, 2015, Tallinn, Estonia 2016 / p. 77-80 : ill <https://doi.org/10.4028/www.scientific.net/KEM.674.77> [Conference Proceedings at Scopus](#) [Article at Scopus](#)

Directional conductivity in layered alumina

Hussainova, Irina; **Saffarshamshirgar, Ali**; **Ivanov, Roman**; **Volobujeva, Olga**; Romanov, Alexey; Gasik, Michael Current applied physics 2022 / p. 68-73 : ill <https://doi.org/10.1016/j.cap.2020.06.009> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Effect of basalt and silica additives on erosive wear resistance of cast ceramics

Baroninš, Janis; **Antonov, Maksim**; **Ivanov, Roman**; Shuliak, Volodymyr; **Hussainova, Irina** Proceedings of the Estonian Academy of Sciences 2016 / p. 144-151 : ill <https://doi.org/10.3176/proc.2016.2.05> https://artiklid.elnet.ee/record=b2768221*est [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Effect of surface features stiffness on tribological performance of 3D printed light-weight Ti6Al4V alloy

Antonov, Maksim; **Pohlak, Meelis**; **Ivanov, Roman**; **Hussainova, Irina** Modern materials and manufacturing 2023 2024 / art. 040015 <https://doi.org/10.1063/5.0189279> [Conference proceedings at Scopus](#) [Article at Scopus](#)

Electroconductive oxide ceramics with graphene-encapsulated fillers

Hussainova, Irina; **Drozdova, Maria**; **Ivanov, Roman**; Kale, Sudhir S.; Jasiuk, Iwona Proceedings of the 42nd international conference on advanced ceramics and composites 2019 / p. 251-258 <https://doi.org/10.1002/9781119543343.ch25> [Conference proceeding at Scopus](#) [Article at Scopus](#) [Article at WOS](#)

Encapsulated whiskers as electroconductive fillers for ceramics

Hussainova, Irina; Ivanov, Roman; Kale, Sudhir S.; Jasiuk, Iwona Short fibre reinforced cementitious composites and ceramics 2019 / p. 131-[139] https://doi.org/10.1007/978-3-030-00868-0_9

Fabrication of alumina nanocomposites reinforced by a novel type of alumina nanofiber and graphene coated alumina nanofiber

Drozdova, Maria; Ivanov, Roman; Aghayan, Marina; Hussainova, Irina; Dong, Minjie; Rodriguez, Miguel Angel Proceedings of the 9th International Conference of DAAAM Baltic Industrial Engineering, 24-26th April 2014, Tallinn, Estonia 2014 / p. 337-341 : ill

A few-layered graphene on alumina nanofibers for electrochemical energy conversion

Hussainova, Irina; Ivanov, Roman; Stamatini, Serban; Anoshkin, Ilya; Skou, Eivind; Nasibulin, Albert Carbon 2015 / p. 157-164 : ill <https://doi.org/10.1016/j.carbon.2015.03.004> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Functionally graded tunable microwave absorber with graphene-augmented alumina nanofibers

Shamshirgar, Ali Saffar; **Rojas Hernandez, Rocio Estefania**; Tewari, Girish C.; Fernandez, Jose Francisco; **Ivanov, Roman**; Karppinen, Maarit; **Hussainova, Irina** ACS applied materials & interfaces 2021 / p. 21613-21625 <https://doi.org/10.1021/acsami.1c02899> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Functionally gradient Ti6Al4V-TiB composite produced by spark plasma sintering

Liu, Le; Ivanov, Roman; Kumar, Rahul, 1993-; Minasyan, Tatevik; Antonov, Maksim; Hussainova, Irina IOP conference series : materials science and engineering 2021 / art. 012004, 6 p.: ill <https://doi.org/10.1088/1757-899X/1140/1/012004>

Graphene augmented nanofibers and their versatile applications

Hussainova, Irina; Ivanov, Roman Reviews on advanced materials and technologies 2020 / p. 9-25 <https://reviewsamt.com/issues/4>

Graphene coated alumina nanofibers as zirconia reinforcement

Ivanov, Roman; Hussainova, Irina; Aghayan, Marina; Petrov, Mihail Proceedings of the 9th International Conference of DAAAM Baltic Industrial Engineering, 24-26th April 2014, Tallinn, Estonia 2014 / p. 348-353 : ill

Graphene covered alumina nanofibers as toughening agent in alumina ceramics

Hussainova, Irina; Drozdova, Maria; Aghayan, Marina; Ivanov, Roman; Perez-Coll, Domingo 13th International Ceramics Congress. Part B 2014 / p. 49-53

Graphene-augmented nanofiber scaffolds demonstrate new features in cells behaviour

Kazantseva, Jekaterina; **Ivanov, Roman**; Gasik, Michael; Neumann, Toomas; **Hussainova, Irina** Scientific reports 2016 / art. 30150, p. 1-8 : ill <https://doi.org/10.1038/srep30150> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Graphene-augmented nanofiber scaffolds trigger gene expression switching of four cancer cell types

Kazantseva, Jekaterina; **Ivanov, Roman**; Gasik, Michael; Neuman, Toomas; **Hussainova, Irina** ACS biomaterials science & engineering 2018 / p. 1622-1629 : ill <https://doi.org/10.1021/acsbiomaterials.8b00228> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Graphene-ceramic hybrid nanofibers for ultrasensitive electrochemical determination of ascorbic acid

Taleb, Masoud; Ivanov, Roman; Bereznev, Sergei; Kazemi, Sayed Habib; **Hussainova, Irina** Microchimica acta 2017 / p. 897-905 : ill <https://doi.org/10.1007/s00604-017-2085-7> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Graphene-encapsulated aluminium oxide nanofibers as a novel type of nanofillers for electroconductive ceramics

Ivanov, Roman; Hussainova, Irina; Aghayan, Marina; Drozdova, Maria; Perez-Coll, Domingo; Rodriguez, Miguel Angel; Rubio-Marcos, Fernando Journal of the European Ceramic Society 2015 / p. 4017-4021 : ill <https://doi.org/10.1016/j.jeurceramsoc.2015.06.011> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

High-temperature wear performance of hBN-added Ni-W composites produced from combustion-synthesized powders

Kumar, Rahul, 1993-; Aydinyan, Sofiya; Ivanov, Roman; Liu, Le; Antonov, Maksim; Hussainova, Irina Materials 2022 / art. 1252 <https://doi.org/10.3390/ma15031252> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Hot sliding wear of 88 wt.% TiB-Ti composites from SHS produced powders

Kumar, Rahul, 1993-; Liu, Le; Antonov, Maksim; Ivanov, Roman; Hussainova, Irina Materials 2021 / art. 1242, 14 p.: ill <https://doi.org/10.3390/ma14051242> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Hybrid graphene/alumina nanofibers for electroconductive zirconia

Drozdova, Maria; Perez-Coll, Domingo; **Aghayan, Marina; Ivanov, Roman**; Rodriguez, Miguel Angel; **Hussainova, Irina** Engineering materials and tribology : selected, peer reviewed papers from the 24th International Baltic Conference on Engineering Materials & Tribology (BALTMATRIB & IFHTSE 2015), November 5-6, 2015, Tallinn, Estonia 2016 / p. 15-20 : ill <https://doi.org/10.4028/www.scientific.net/KEM.674.15> [Conference Proceedings at Scopus](#) [Article at Scopus](#)

Hybrid graphene-ceramic nanofibre network for spontaneous neural differentiation of stem cells

Kazantseva, Jekaterina; **Hussainova, Irina; Ivanov, Roman**; Neumann, Toomas; Gasik, Michael Interface focus 2018 / 6 p. : ill
<https://doi.org/10.1098/rsfs.2017.0037> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Laser powder-bed fusion of Mo(Si,Al)₂ – based composite for elevated temperature applications

Minasyan, Tatevik; Ivanov, Roman; Toyserkani, Ehsan; **Hussainova, Irina** Journal of alloys and compounds 2021 / art. 161034
<https://doi.org/10.1016/j.jallcom.2021.161034> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Layered functionally graded alumina ceramic composites

Drozdova, Maria; Ivanov, Roman; Rodriguez, Miguel Angel; **Hussainova, Irina** ECerS 2017 : 15th Conference & Exhibition of the European Ceramic Society, July 9–13, 2017, Budapest, Hungary : Book of abstracts 2017 / p. 227
<https://static.akcongress.com/downloads/ecers/ecers2017-abstract-book.pdf>

Mo(Si,Al)₂ by laser powder bed fusion of AlSi10Mg and combustion synthesized MoSi₂

Minasyan, Tatevik; Ivanov, Roman; Toyserkani, Ehsan; Hussainova, Irina Materials letters 2022 / art. 131041
<https://doi.org/10.1016/j.matlet.2021.131041> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Novel alumina-nanocarbon hybrids

Hussainova, Irina; Anoshkin, Ilya; **Ivanov, Roman; Kübarsepp, Jakob** 38th International Conference & Exposition on Advanced Ceramics and Composites : abstract book : January 26-31, 2014, Daytona Beach, Florida 2014 / p. 117

On the potential of Transparent Rare-Earth-Free ZnAl₂O₄ Ceramics targeted at the UV-C to UV-B emission

Rojas Hernandez, Rocio Estefania; Rubio-Marcos, Fernando; Romet, Ivo; Feldbach, Eduard; Buryi, Maksym; John, David; **Ivanov, Roman; Hussainova, Irina**; Fernandez, José F.; Nagirnyi, Vitali Applied materials today 2024 / ar. 102230, 14 p. : ill
<https://doi.org/10.1016/j.apmt.2024.102230> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Production of metal–ceramic lattice structures by selective laser melting and carburizing or nitriding

Holovenko, Yaroslav; Kollo, Lauri; Jõelet, Marek; Ivanov, Roman; Soloviova, Tetiana; **Veinthal, Renno** Proceedings of the Estonian Academy of Sciences 2019 / p. 131–139 : ill <https://doi.org/10.3176/proc.2019.2.02>
http://www.kirj.ee/public/proceedings_pdf/2019/issue_2/proc-2019-2-131-139.pdf [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Quantifying graphitic edge exposure in graphene-based materials and its role in oxygen reduction reactions

Stamatin, Serban; **Hussainova, Irina; Ivanov, Roman**; Colavita, Paula E. ASC catalysis 2016 / p. 5215-5221 : ill
<https://doi.org/10.1021/acscatal.6b00945> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Selective laser melting of TiB₂-Ti composite with high content of ceramic phase

Liu, Le; Minasyan, Tatevik; Ivanov, Roman; Aydinyan, Sofiya; Hussainova, Irina Ceramics international 2020 / p. 21128-21135
<https://doi.org/10.1016/j.ceramint.2020.05.189> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Spark plasma sintering of layered γ-Al₂O₃/graphene reinforced nanocomposites

Saffarshamshirgar, Ali; Ivanov, Roman; Hussainova, Irina Proceedings of the Estonian Academy of Sciences 2019 / p. 140–144 : ill <https://doi.org/10.3176/proc.2019.2.04> http://www.kirj.ee/public/proceedings_pdf/2019/issue_2/proc-2019-2-140-144.pdf [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Thermal transport and thermoelectric effect in composites of alumina and graphene-augmented alumina nanofibers

Saffarshamshirgar, Ali; Belmonte, Manuel; Tewari, Girish C.; **Rojas Hernandez, Rocio Estefania**; Seitsonen, Jani; **Ivanov, Roman**; Karppinen, Maarit; Miranzo, Pilar; **Hussainova, Irina** Materials 2021 / art. 2242 <https://doi.org/10.3390/ma14092242> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

3D alumina-graphene hybrid nanofibers as a binder-free cathode for rechargeable LiIS batteries

Taleb, Masoud; Ivanov, Roman; Hussainova, Irina Modern Materials and Manufacturing 2019 : 12th International DAAAM Baltic Conference and 27th International Baltic Conference BALTMATRIB 2019. Selected, peer reviewed papers from the conference Modern Materials and Manufacturing 2019 (MMM 2019), April 24–26, 2019, Tallinn, Estonia 2019 / p. 191-196 : ill
<https://www.scientific.net/KEM.799.191> https://www.ester.ee/record=b5235278*est <https://doi.org/10.4028/www.scientific.net/KEM.799.191> [Conference proceeding at Scopus](#) [Article at Scopus](#)

3D printing of plain and gradient cermets with efficient use of raw materials

Antonov, Maksim; Ivanov, Roman; Holovenko, Yaroslav; Goljandin, Dmitri; Rahmani Ahranjani, Ramin; Kollo, Lauri; Hussainova, Irina Modern Materials and Manufacturing 2019 : 12th International DAAAM Baltic Conference and 27th International Baltic Conference BALTMATRIB 2019. Selected, peer reviewed papers from the conference Modern Materials and Manufacturing 2019 (MMM 2019), April 24–26, 2019, Tallinn, Estonia 2019 / p. 239-245 : ill <https://doi.org/10.4028/www.scientific.net/KEM.799.239>
https://www.ester.ee/record=b5235278*est [Conference proceeding at Scopus](#) [Article at Scopus](#)

3D printing of plain and gradient cermets with efficient use of raw materials

Antonov, Maksim; Ivanov, Roman; Holovenko, Yaroslav; Goljandin, Dmitri; Rahmani Ahranjani, Ramin; Kollo, Lauri;

Hussainova, Irina Cermets : aggregated book 2023 / p. 83–90 <https://doi.org/10.4028/b-jj9Oly>

Tunneling-percolation behavior of graphene-encapsulated whiskers as electroconductive fillers for ceramics

Hussainova, Irina; Ivanov, Roman; Kale, Sudhir S.; Jasiuk, Iwona Short fibre reinforced cementitious composites and ceramics 2019 / p. 131-139 https://doi.org/10.1007/978-3-030-00868-0_9 [Article collection metrics at Scopus](#) [Article at Scopus](#)

Ultra-sensitive voltammetric simultaneous determination of dopamine, uric acid and ascorbic acid based on a graphene-coated alumina electrode

Taleb, Masoud; Ivanov, Roman; Bereznev, Sergei; Kazemi, Sayed Habib; **Hussainova, Irina** Microchimica acta 2017 / p. 4603-4610 : ill <https://doi.org/10.1007/s00604-017-2510-y> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Ultra-wideband integrated graphene-based absorbers for terahertz waveguide systems

Campion, James; Xenidis, Nikolaos; Smirnov, Serguei; **Ivanov, Roman**; Oberhammer, Joachim; **Hussainova, Irina**; **Lioubtchenko, Dmitri** Advanced Electronic Materials 2022 / art. 2200106 <https://doi.org/10.1002/aelm.202200106> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Versatile graphene-alumina nanofibers for microwave absorption and EMI shielding

Saffar Shamshirgar, Ali; Alvarez, Maria Fernandez; Del Campo, Adolfo; Fernandez, Jose Francisco; Rojas Hernandez, Rocio Estefania; Ivanov, Roman; Rosen, Johanna; **Hussainova, Irina** Carbon 2023 / art. 118057 <https://doi.org/10.1016/j.carbon.2023.118057> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)