

## 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

## 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 "Funktsoonalsed materjalid ja tehnoloogiad" : 04.-05. märts 2014, Tartu 2014 / [1] p

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

**Ivanov, Roman** 2017 <https://digi.lib.ttu.ee/i/?29128>

## 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 (BALTMATTRIB & IFHTSE 2015), November 5-6, 2015, Tallinn, Estonia 2016 / p. 77-80 : ill <http://dx.doi.org/10.4028/www.scientific.net/KEM.674.77>

## 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 <http://dx.doi.org/10.3176/proc.2016.2.05> [https://artiklid.elnet.ee/record=b2768221\\*est](https://artiklid.elnet.ee/record=b2768221*est)

## 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>

## Electroconductive oxide ceramics with graphenellencapsulated 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](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**; Stamatin, Serban; Anoshkin, Ilya; Skou, Eivind; Nasibulin, Albert Carbon 2015 / p. 157-164 : ill <https://doi.org/10.1016/j.carbon.2015.03.004>

## Functionally graded tunable microwave absorber with graphene-augmented alumina nanofibers

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**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, Mihhail 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 <http://dx.doi.org/10.1038/srep30150>

**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; Bereznay, Sergei; Kazemi, Sayed Habib; Hussainova, Irina Microchimica acta 2017 / p. 897-905 : ill <https://doi.org/10.1007/s00604-017-2085-7>

**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 <http://dx.doi.org/10.1016/j.jeurceramsoc.2015.06.011>

**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 (BALTMATTRIB & IFHTSE 2015), November 5-6, 2015, Tallinn, Estonia 2016 / p. 15-20 : ill <http://dx.doi.org/10.4028/www.scientific.net/KEM.674.15>

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

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**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**

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**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

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

**Holovenko, Yaroslav; Kollo, Lauri; Jöeleht, 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>

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

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<http://dx.doi.org/10.1021/acscatal.6b00945>

### **Selective laser melting of TiB<sub>2</sub>-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](#)  
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### **Spark plasma sintering of layered γ-Al<sub>2</sub>O<sub>3</sub>/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](http://www.kirj.ee/public/proceedings_pdf/2019/issue_2/proc-2019-2-140-144.pdf) [Journal metrics at Scopus Article at Scopus Journal](#)  
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### **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/ma1409224> [Journal metrics at Scopus Article at Scopus Journal](#)  
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### **3D alumina-graphene hybrid nanofibers as a binder-free cathode for rechargeable Li|S batteries**

**Taleb, Masoud; Ivanov, Roman; Hussainova, Irina** Modern Materials and Manufacturing 2019 : 12th International DAAAM Baltic Conference and 27th International Baltic Conference BALTMATTRIB 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.estet.ee/record=b5235278\\*est](https://www.estet.ee/record=b5235278*est) <https://doi.org/10.4028/www.scientific.net/KEM.799.191>  
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### **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 BALTMATTRIB 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>  
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### **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](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>

### **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/10.1002aelm.202200106> [Journal metrics at Scopus Article at Scopus](#)  
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### **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>