

### **Additively manufactured mesostructured MoSi<sub>2</sub>-Si<sub>3</sub>N<sub>4</sub> ceramic lattice**

**Minasyan, Tatevik; Liu, Le; Holovenko, Yaroslav; Aydinyan, Sofiya; Hussainova, Irina** Ceramics international 2019 / p. 9926-9933 <https://doi.org/10.1016/j.ceramint.2019.02.035> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

### **AlCo-rich AlCoNiFe and AlCoNiFeCr high entropy alloys: Synthesis and interaction pathway at high heating rates**

Nazaretyan, K.; **Aydinyan, Sofiya**; Kirakosyan, H.; Moskovskikh, D.; Nepapushev, A.; Kuskov, K.; Tumanyan, M.; Zargaryan, A.; **Traksmaa, Rainer; Kharatyan, S.** Journal of alloys and compounds 2023 / art. 167589, 13 p  
<https://doi.org/10.1016/j.jallcom.2022.167589> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

### **Bio-inspired TiB<sub>2</sub>-TiB-TiN lattices by selective laser melting**

**Liu, Le; Minasyan, Tatevik; Kamboj, Nikhil; Aydinyan, Sofiya; Hussainova, Irina** Materials Letters 2020 / art. 128337  
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### **Combustion synthesis and consolidation of Ni-W nanocomposite material**

Zakaryan, Marieta; **Aydinyan, Sofiya**; Kharatyan, Suren Ceramics in modern technologies 2019 / p. 67-74  
<https://doi.org/10.29272/cmt.2018.0007>

### **Combustion synthesis and reactive spark plasma sintering of non-equiatomic coal-based high entropy intermetallics**

Kuskov, Kirill Vasilevich; Nepapushev, Andrey A.; **Aydinyan, Sofiya**; Shaysultanov, Dmitry G.; Stepanov, Nikita D.; Nazaretyan, Khachik; Kharatyan, Suren; Zakharova, Elena V.; Belov, Dmitry S.; Moskovskikh, Dmitry O. Materials 2023 / art. 1490  
<https://doi.org/10.3390/ma16041490> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

### **Combustion synthesis of MAX phases: Microstructure and properties inherited from the processing pathway**

**Aydinyan, Sofiya** Crystals 2023 / art. 1143 <https://doi.org/10.3390/cryst13071143> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

### **Combustion synthesis of MoSi<sub>2</sub> based composite and selective laser sintering thereof**

**Minasyan, Tatevik; Aghayan, Marina; Liu, Le; Aydinyan, Sofiya; Kollo, Lauri; Hussainova, Irina**; Rodriguez, Miguel Angel Journal of the European Ceramic Society 2018 / p. 3814-3821 : ill <https://doi.org/10.1016/j.jeurceramsoc.2018.04.043> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

### **Combustion synthesis of nanoscale boron and silicon carbides**

Zakaryan, Marieta; Amirkhanyan, Narine; Kirakosyan, Hasmik; Zurnachyan, Alina; **Aydinyan, Sofiya** CIMTEC 2022 : 15th International Ceramics Congress (June 20-24) CIMTEC 2022 : 9th Forum on New Materials (June 25-29) 2022 [http://2022.cimtec-congress.org/focused-session-ca-11\\_1](http://2022.cimtec-congress.org/focused-session-ca-11_1)

### **DTATG study of NiO Reduction by Mg+C combined reducer**

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[https://www.ester.ee/record=b1300031\\*est](https://www.ester.ee/record=b1300031*est)

### **Fabrication of Cu-Mo composites combining SHS and SLS technologies : poster presentation**

**Aydinyan, Sofiya; Minasyan, Tatevik**; Kirakosyan, Hasmik; **Aghayan, Marina; Hussainova, Irina**; Kharatyan, Suren ECerS 2017 : 15th Conference & Exhibition of the European Ceramic Society, July 9-13, 2017, Budapest, Hungary : Book of abstracts 2017 / p. 48 <https://static.akcongress.com/downloads/ecers/ecers2017-abstract-book.pdf>

### **Fabrication of Cu-W nanocomposites by integration of self-propagating high-temperature synthesis and hot explosive consolidation technologies**

**Aydinyan, Sofiya**; Kirakosyan, Hasmik; Zakaryan, Marieta Eurasian chemico-technological journal 2018 / p. 301-309 : ill  
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**Minasyan, Tatevik; Aydinyan, Sofiya; Liu, Lei**; Cygan, Slawomir; **Hussainova, Irina** [2018 World Congress on Powder Metallurgy (WORLDPM2018), Beijing, China, 16-18 September 2018 2018 / p. [515-518] : [USB]

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**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](#)

### **In situ Mo(Si,Al)<sub>2</sub>-based composite through selective laser melting of a MoSi<sub>2</sub>-30 wt.% AlSi10Mg mixture**

**Minasyan, Tatevik; Aydinyan, Sofiya**; Toyserkani, Ehsan; **Hussainova, Irina** Materials 2020 / art. 3720 ; 13 p  
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### **The influence of high-energy ball milling and nanoadditives on the kinetics of heterogeneous reaction in Ni-Al system**

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Zakaryan, Marieta; Nazaretyan, K.; **Aydinyan, Sofiya;** Kharatyan, Suren XV International Symposium on Self-Propagating HighTemperature Synthesis, September 16-20, 2019 2019 / p. 546-548 : ill [http://www.ism.ac.ru/events/SHS2019/doc/abstract\\_shs2019.pdf](http://www.ism.ac.ru/events/SHS2019/doc/abstract_shs2019.pdf)

### **Joint reduction of NiO/WO<sub>3</sub> pair and NiWO<sub>4</sub> by Mg + C combined reducer at high heating rates**

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### **Kinetic highlights of the reduction of silver tungstate by Mg + C combined reducer**

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### **Lattice of MoSi<sub>2</sub>/Si<sub>3</sub>N<sub>4</sub> by selective laser melting**

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### **Magnesian-carbothermal reduction of CuW<sub>4</sub>/MeO nanostructured precursors & synthesis of W/Cu composite materials**

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### **Microstructure and high temperature tribological behaviour of self-lubricating Ti-TiB<sub>x</sub> composite doped with Ni-Bi**

**Kumar, Rahul, 1993-;** Torres, Hector; **Aydinyan, Sofiya;** **Antonov, Maksim;** Varga, Markus; Rodriguez Ripoll, Manel; **Hussainova, Irina** Surface and coatings technology 2022 / art. 128827 <https://doi.org/10.1016/j.surfcoat.2022.128827> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

### **Microwave synthesis of B<sub>4</sub>C nanopowder for subsequent spark plasma sintering**

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### **Mo(Si<sub>1-x</sub>Al<sub>x</sub>)<sub>2</sub>-based composite by reactive laser powder-bed fusion**

**Minasyan, Tatevik;** **Aydinyan, Sofiya;** Liu, Le; **Volobujeva, Olga;** Toyserkani, Ehsan; **Hussainova, Irina** Materials letters 2020 / art. 128776, 5 p. : ill <https://doi.org/10.1016/j.matlet.2020.128776> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

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**Nanosize molybdenum carbide preparation by sol-gel combustion synthesis with subsequent fast heating**  
Kirakosyan, Hasmik; Nazaretyan, Khachatur; Kirakosyan, Khachatur; Tumanyan, M.E.; **Aydinyan, Sofiya**; Kharatyan, Suren  
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**Novel approach for the preparation of shapes from TiB<sub>2</sub>-Si<sub>3</sub>N<sub>4</sub> composite by selective laser melting**  
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**A novel approach to fabricate Si<sub>3</sub>N<sub>4</sub> by selective laser melting**  
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**Parametric study on in situ Laser powder bed fusion of Mo(Si<sub>1-x</sub>Al<sub>x</sub>)<sub>2</sub>**  
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**The preparation of high-entropy refractory alloys by aluminothermic reduction process**  
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### **Reduction mechanism of WO<sub>3</sub> + CuO mixture by combined Mg/C reducer : non-isothermal conditions - high heating rates**

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**Aydinyan, Sofiya**; Liu, Le; **Minasyan, Tatevik**; **Hussainova, Irina** XVI Conference and Exhibition Of The European Ceramic Society : abstract book 2019 / p. 22

### **Selective Laser Melting Of Combustion Synthesized 2Mo-Cu and 3Cu-Mo Composites**

**Minasyan, Tatevik**; **Aydinyan, Sofiya**; Kharatyan, Suren SHS 2017 : XIV International Symposium On Self-Propagating High Temperature Synthesis, September 25-28, 2017, Tblisi, Georgia : Book of Abstracts 2017 / p. 155–156 : ill [http://mmi.ge/uploads/files/2017-10/1507298270\\_book-of-abstracts-shs-2017.pdf](http://mmi.ge/uploads/files/2017-10/1507298270_book-of-abstracts-shs-2017.pdf)

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**Minasyan, Tatevik**; Liu, Le; **Aydinyan, Sofiya**; **Antonov, Maksim**; **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. 257-262 : ill <https://www.scientific.net/KEM.799.257> [https://www.ester.ee/record=b5235278\\*est](https://www.ester.ee/record=b5235278*est) <https://doi.org/10.4028/www.scientific.net/KEM.799.257> [Conference proceeding at Scopus](#) [Article at Scopus](#)

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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](#)

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**Aydinyan, Sofiya**; Liu, Le; **Hussainova, Irina** Abstracts : 14th International Ceramics Congress 2018 / CB-10.2:L06 [http://2018.cimtec-congress.org/abstracts\\_focused\\_session\\_cb-10](http://2018.cimtec-congress.org/abstracts_focused_session_cb-10)

### **Selective laser sintering of combustion synthesized titanium diboride based composites**

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### **Self-Propagating High-Temperature Synthesis of Silicon Carbide Using Reactions Thermokinetic Coupling Approach**

**Amirkhanyan, Narine**; Kirakosyan, Hasmik; Zakaryan, Marieta; **Zurnachyan, Alina**; **Aydinyan, Sofiya** EC-SILICONF2 : The 2nd European Conference on Silicon and Silica Based Materials, Hungary, October 4-8, 2021 2021 / p. 118

### **SHS produced TiB<sub>2</sub>-Si powders for selective laser melting of ceramic-based composite**

Liu, Le; **Aydinyan, Sofiya**; **Minasyan, Tatevik**; **Hussainova, Irina** Applied sciences 2020 / art. 3283, 12 p. : ill <https://doi.org/10.3390/app10093283> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

### **SHS reprocessing of copper oxide waste into copper powder**

Mahmoudi, H. A.; Abovyan, L.S.; **Aydinyan, Sofiya**; Kharatyan, Suren International Journal of Self-propagating High-temperature Synthesis 2019 / p. 233–238 : ill <https://doi.org/10.3103/S1061386219040095> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

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**Aydinyan, Sofiya**; Kharatyan, Suren; **Hussainova, Irina** Materials 2021 / art. 5117 <https://doi.org/10.3390/ma14175117> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

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**Aydinyan, Sofiya**; **Hussainova, Irina**; Kharatyan, Suren CIMTEC 2022 : 15th International Ceramics Congress (June 20-24) CIMTEC 2022 : 9th Forum on New Materials (June 25-29) 2022 [http://2022.cimtec-congress.org/focused-session-ca-11\\_1](http://2022.cimtec-congress.org/focused-session-ca-11_1)

### **Sintering behavior of ZrC-TiC-MoSi<sub>2</sub> ceramic composite [Online resource]**

**Minasyan, Tatevik**; **Aydinyan, Sofiya**; Liu, Le; Cygan, Slawomir; **Hussainova, Irina** Explosive Production of New Materials :

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### **Solution combustion synthesis and spark plasma sintering of magnetic high entropy materials**

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### **Solution combustion synthesis of MnFeCoNiCu and (MnFeCoNiCu)<sub>3</sub>O<sub>4</sub> high entropy materials and sintering thereof**

**Aydinyan, Sofiya**; Kirakosyan, Hasmik; Sargsyan, Armen; **Volobujeva, Olga**; Kharatyan, Suren Ceramics International 2022 / p. 20294-20305 : ill <https://doi.org/10.1016/j.ceramint.2022.03.310> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

### **Solution combustion synthesis of nanostructured molybdenum carbide**

Kirakosyan, Hasmik; Nazaretyan, K.T.; Mnatsakanyan, R.A.; **Aydinyan, Sofiya**; Kharatyan, Suren Journal of nanoparticle research 2018 / art. 214, 11 p. : ill <https://doi.org/10.1007/s11051-018-4312-5> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

### **Spark plasma sintering of combustion synthesized TiB<sub>2</sub>-Si composite**

**Liu, Le**; **Aydinyan, Sofiya**; **Minasyan, Tatevik**; **Baroninš, Janis**; **Antonov, Maksim**; Kharatyan, Suren; **Hussainova, Irina** Ceramics in modern technologies 2019 / p. 59-66 <https://doi.org/10.29272/cmt.2018.0009>

### **Study of reduction mechanism of WO<sub>3</sub>+CuO mixture by combined Mg/C reducer - influence of high heating rate**

Nazaretyan, Khachik; Zargaryan, Armen; **Aydinyan, Sofiya**; Kharatyan, Suren JTACC+V4 : 1st Journal of Thermal Analysis and Calorimetry Conference and 6th V4 (Joint Czech-Hungarian-Polish-Slovakian) Thermoanalytical Conference : June 6–9, 2017, Budapest, Hungary : Book of Abstracts 2017 / p. 206-207 <https://static.akcongress.com/downloads/jtacc/jtacc2017-book-of-abstracts.pdf>

### **Superhard B<sub>4</sub>C-ReB<sub>2</sub> composite by SPS of microwave synthesized nanopowders**

Mnatsakanyan, R.; Davtyan, D.; **Minasyan, Tatevik**; **Aydinyan, Sofiya**; **Hussainova, Irina** Materials letters 2021 / art. 129163, 5 p. : ill <https://doi.org/10.1016/j.matlet.2020.129163> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

### **Synthesis and consolidation of Mo-Cu composite nanopowder [Online resource]**

**Minasyan, Tatevik**; Kirakosyan, Hasmik; **Aydinyan, Sofiya**; **Liu, Le**; **Hussainova, Irina**; Kharatyan, Suren Explosive Production of New Materials : Science, Technology, Business, and Innovations 2018 / p. 151-153 : ill [http://www.ism.ac.ru/events/EPNM2018/EPNM2018\\_BookofPapers.pdf](http://www.ism.ac.ru/events/EPNM2018/EPNM2018_BookofPapers.pdf) <http://dx.doi.org/10.30826/EPNM18-053>

### **Synthesis of Ni-W nanopowders from oxide and salt precursors in combustion mode by using thermo-kinetic coupling approach [Online resource]**

Zakaryan, Marieta; **Aydinyan, Sofiya**; Kharatyan, Suren Explosive Production of New Materials : Science, Technology, Business, and Innovations 2018 / p. 298-300 : ill [http://www.ism.ac.ru/events/EPNM2018/EPNM2018\\_BookofPapers.pdf](http://www.ism.ac.ru/events/EPNM2018/EPNM2018_BookofPapers.pdf) <http://dx.doi.org/10.30826/EPNM18-103>

### **Synthesis of Ti<sub>2</sub>AlC MAX phase and Ti<sub>2</sub>C MXene by activated combustion**

**Aydinyan, Sofiya** Ceramics international 2024 / p. 12263-12269 <https://doi.org/10.1016/j.ceramint.2024.01.130>

### **ZrC based ceramics by high pressure high temperature SPS technique**

**Aydinyan, Sofiya**; **Minasyan, Tatevik**; **Liu, Le**; Cygan, Slawomir; **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. 125-130 : ill [https://www.ester.ee/record=b5235278\\*est](https://www.ester.ee/record=b5235278*est) <https://www.scientific.net/KEM.799.125> <https://doi.org/10.4028/www.scientific.net/KEM.799.125> [Conference proceeding at Scopus](#) [Article at Scopus](#)

### **ZrC-TiC-MoSi<sub>2</sub> ceramic composite by spark plasma sintering**

**Hussainova, Irina**; **Minasyan, Tatevik**; **Liu, Le**; **Aydinyan, Sofiya** Journal of Physics: Conference Series 2020 / art. 012028 <https://doi.org/10.1088/1742-6596/1527/1/012028> [Conference Proceedings at Scopus](#) [Article at Scopus](#) [Article at WOS](#)

### **The mechanism of WO<sub>3</sub>(MoO<sub>3</sub>) & CuO coreduction by combined Mg/c reducer at non isothermal conditions**

**Aydinyan, Sofiya**; Kharatyan, Suren SHS 2017 : XIV International Symposium On Self-Propagating High Temperature Synthesis, September 25-28, 2017, Tblisi, Georgia : Book of Abstracts 2017 / p. 45-47 : ill [http://mmi.ge/uploads/files/2017-10/1507298270\\_book-of-abstracts-shs-2017.pdf](http://mmi.ge/uploads/files/2017-10/1507298270_book-of-abstracts-shs-2017.pdf)

### **The preparation of TiC/TiN composites by selective laser melting**

**Liu, Le; Minasyan, Tatevik; Aydinyan, Sofiya; 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. 165-170 : ill [https://www.ester.ee/record=b5235278\\*est](https://www.ester.ee/record=b5235278*est) <https://www.scientific.net/KEM.799.165> <https://doi.org/10.4028/www.scientific.net/KEM.799.165>  
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<https://doi.org/10.23658/taltech.47/2021>

**Tribological behavior of Ni-based self-lubricating claddings containing sulfide of nickel, copper, or bismuth at temperatures up to 600 °C**

**Kumar, Rahul, 1993-; Torres, Hector; Aydinyan, Sofiya; Antonov, Maksim; Varga, Markus; Hussainova, Irina; Rodriguez Ripoll, Manel** Surface and coatings technology 2023 / art. 129270, 14 p. : ill <https://doi.org/10.1016/j.surfcoat.2023.129270> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

**Ultrahigh pressure spark plasma sintering of ZrC-TiC-MoSi<sub>2</sub> and ZrC-TiC-Si<sub>3</sub>N<sub>4</sub> composites [Online resource]**

**Minasyan, Tatevik; Aydinyan, Sofiya; Liu, Le; Cygan, Slawomir; Hussainova, Irina** Tartu Ülikooli ASTRA projekt PER ASPERA : Funktsionaalsed materjalid ja tehnoloogiad : [7-8 märtsil 2018, Tallinn : teesid] GSFMT Scientific Conference 2018 : Tallinn, March 7-8, 2018 : abstracts 2018 / 1 p <http://fntdk.ut.ee/teesid-2018/>

**Термическое и кинетическое сопряженные реакций при самораспространяющемся высокотемпературном синтезе материалов**

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