

### **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  
<https://doi.org/10.1016/j.matlet.2020.128337> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

### **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](#)

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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**

Zakaryan, Marieta; Niazyan, D.; Aydinyan, Sofiya; Kharatyan, Suren Հայաստանի քիմիական հանդես = Chemical Journal of Armenia = Химический журнал Армении 2018 / p. 473-485 : ill <http://chemistry.asj-oa.am/id/eprint/7899>  
[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**

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### **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  
<https://doi.org/10.18321/ectj763>

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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]

### **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](#)

### **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  
<https://doi.org/10.3390/ma13173720> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

### **The influence of high-energy ball milling and nanoadditives on the kinetics of heterogeneous reaction in Ni-Al system**

Nazaretyan, Khachik; Kirakosyan, Hasmik; Aydinyan, Sofiya; Zakaryan, Marieta; Abovyan, L. S.; Kulak, M.; Khina, B. IOP conference series : materials science and engineering 2021 / art. 012052 <https://doi.org/10.1088/1757-899X/1140/1/012052>

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**Aydinyan, Sofiya**; Kharatyan, Suren; **Hussainova, Irina** Crystals 2022 / art. 59 <https://doi.org/10.3390/cryst12010059> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

### **The interaction pathway in the mechano-ultrasonically assisted and carbon-nanotubes augmented nickel-aluminum system**

Nazaretyan, Khachik; Kirakosyan, Hasmik; **Volobujeva, Olga**; **Aydinyan, Sofiya** Metals 2022 / art. 436 <https://doi.org/10.3390/met12030436> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

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Zakaryan, Marieta; Nazaretyan, K.; **Aydinyan, Sofiya**; Kharatyan, Suren XV International Symposium on Self-Propagating High Temperature 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**

Zakaryan, Marieta; Nazaretyan, Khachik; **Aydinyan, Sofiya**; Kharatyan, Suren Metals 2021 / art. 1351, 13 p. : ill <https://doi.org/10.3390/met11091351> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

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Zakaryan, Marieta; Nazaretyan, Khachik; **Aydinyan, Sofiya**; Kharatyan, Suren Metals 2022 / art. 1000 <https://doi.org/10.3390/met12061000> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

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

**Minasyan, Tatevik**; Liu, Le; **Aydinyan, Sofiya**; Kollo, Lauri; **Aghayan, Marina**; **Hussainova, Irina** European Powder Metallurgy Association : proceedings : 14 – 18 October 2018, Bilbao, Spain 2018 / art. 3993050 [USB] <https://www.epma.com/publications/euro-pm-proceedings/product/euro-pm2018-proceedings-usb>

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

Zakaryan, Marieta; Kirakosyan, Hasmik; Abovyan, L.; **Aydinyan, Sofiya**; Kharatyan, Suren Chemical Journal of Armenia 2017 / p. 450-461 <http://chemistry.asj-oa.am/id/eprint/7826>

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Kirakosyan, Hasmik; Nazaretyan, Khachik; **Aydinyan, Sofiya**; Kharatyan, Suren Journal of composites science 2021 / art. 318, 20 p. : ill <https://doi.org/10.3390/jcs5120318> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

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**Minasyan, Tatevik**; Liu, Le; Aghayan, Marina; Rodriguez, Miguel Angel; **Aydinyan, Sofiya**; **Hussainova, Irina** Progress in natural science: materials international 2019 / p. 190-197 : ill <https://doi.org/10.1016/j.pnsc.2019.03.017> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

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**Minasyan, Tatevik**; Liu, Le; **Aydinyan, Sofiya**; **Hussainova, Irina** XVI Conference and Exhibition Of The European Ceramic Society : abstract book 2019 / p. 80

### **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**

Davtyan, D.; Mnatsakanyan, R.A.; Liu, Le; **Aydinyan, Sofiya**; **Hussainova, Irina** Journal of materials research and technology 2019 / p. 5823-5832 : ill <https://doi.org/10.1016/j.jmrt.2019.09.052> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

### **Mo-Cu pseudoalloys by combustion synthesis and spark plasma sintering**

**Minasyan, Tatevik**; Kirakosyan, Hasmik; **Aydinyan, Sofiya**; Liu, Lei; Kharatyan, Suren; **Hussainova, Irina** Journal of materials science 2018 / p. 16598–16608 <https://doi.org/10.1007/s10853-018-2787-1> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

### **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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**Nanosized molybdenum carbide synthesized by solution combustion synthesis with subsequent thermal treatment**

Nazaretyan, Khachik; Kirakosyan, Hasmik; **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. 175-176 : ill  
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**NiO and WO<sub>3</sub> coreduction by combined reducers Mg/C and preparation of W-Ni alloy [Online resource]**

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Zakaryan, Marieta; Nazaretyan, K.T.; **Aydinyan, Sofiya**; Kharatyan, Suren Journal of thermal analysis and calorimetry 2021 / p. 1811-1817 : ill <https://doi.org/10.1007/s10973-020-10148-5> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

**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**

**Liu, Le; Minasyan, Tatevik; Aydinyan, Sofiya; Hussainova, Irina** Proceedings of the Euro PM 2018 Congress : Bilbao, Spain. 14-18 October 2018 2018 <https://www.epma.com/publications/euro-pm-proceedings/product/euro-pm2018-am-special-materials>

**Novel approach for the synthesis and sintering of TiB<sub>2</sub>-Si<sub>3</sub>N<sub>4</sub> ceramic composite**

**Liu, Le; Minasyan, Tatevik; Aydinyan, Sofiya; Hussainova, Irina** European Powder Metallurgy Association : proceedings : 14 - 18 October 2018, Bilbao, Spain 2018 / art. 3987173 [USB] <https://www.epma.com/publications/euro-pm-proceedings/product/euro-pm2018-proceedings-usb>

**A novel approach to fabricate Si<sub>3</sub>N<sub>4</sub> by selective laser melting**

**Minasyan, Tatevik; Liu, Le; Aghayan, Marina; Kollo, Lauri; Kamboj, Nikhil Kumar; Aydinyan, Sofiya; Hussainova, Irina** Ceramics international 2018 / p. 13689-13694 : ill <https://doi.org/10.1016/j.ceramint.2018.04.208> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

**Novel pathway for the combustion synthesis and consolidation of boron carbide**

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Kirakosyan, Hasmik; Nazaretyan, Khachik; Amirkhanyan, Narine; Beglaryan, Hayk; **Aydinyan, Sofiya** Modern materials and manufacturing 2023 2024 / art. 040009 <https://doi.org/10.1063/5.0189204>

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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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**Preparation of nanosize MO<sub>2</sub>C by combining solution combustion synthesis with subsequent F**

Nazaretyan, Khachik; Kirakosyan, Hasmik; **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,

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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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**Selective laser melting of ceramic composites**

**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  
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**Selective laser melting of Ti/cBN composite**

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**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  
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**Selective laser melting of Ti-B-Si system produced by SHS [Online resource]**

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**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**

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

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**SHS-derived powders by reactions' coupling as primary products for subsequent consolidation**

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**SHS-derived powders obtained by coupled reactions and thermal dilution for subsequent consolidation**

**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 : Science, Technology, Business, and Innovations 2018 / p. 148-150 : ill  
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**Sintering of silicon carbide obtained by combustion synthesis**



Amirkhanyan, Narine; Kirakosyan, Hasmik; Zakaryan, Marieta; Zurnachyan, Alina; Rodriguez, Miguel Angel; Abovyan, L.; **Aydinyan, Sofiya** Ceramics international 2023 / p. 26129-26134 <https://doi.org/10.1016/j.ceramint.2023.04.233> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

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

Kirakosyan, Hasmik; Sargsyan, Armen; **Aydinyan, Sofiya**; 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)

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

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

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**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]**

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