

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](#)

High-entropy (Ti_{0.4}Ta_{0.4}V_{0.4}Nb_{0.4}Cr_{0.4})AlC MAX phase synthesized by SHS : structural, thermal, and mechanical insights

Melkonyan, S.; Zakaryan, Marieta; Grigoryan, Y.; **Hussainova, Irina**; **Aydinyan, Sofiya**; Kharatyan, Suren JTACC+V4 2025 : 4th Journal of Thermal Analysis and Calorimetry Conference & 10th V4 (Joint Czech-Hungarian-Polish-Slovak) Thermoanalytical Conference : Book of Abstracts 2025 / p. 179 <https://static.akcongress.com/downloads/jtacc/jtacc2025/jtacc2025-boa.pdf>

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](#)

The influence of thermal dilution on the microstructure evolution of some combustion-synthesized refractory ceramic composites

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](#)

Novel pathway for the combustion synthesis and consolidation of boron carbide

Zakaryan, Marieta; Zurnachyan, Alina; Amirkhanyan, Narine; Kirakosyan, Hasmik; **Antonov, Maksim**; Rodriguez, Miguel Angel; **Aydinyan, Sofiya** Materials 2022 / art. 5042 <https://doi.org/10.3390/ma15145042> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Phase and microstructure evolution patterns at combustion synthesis of high-entropy M₂AlC (M=Ti/Ta/V/Nb/Cr) MAX phase

Melkonyan, Syuzanna; Zakaryan, Marieta; Grigoryan, Yeva; Kharatyan, Suren; **Hussainova, Irina**; Chabanais, Florian; Shamshirgar, Ali Saffar; Persson, Per O. A.; Rosen, Johanna; **Aydinyan, Sofiya** Journal of materials research and technology 2025 / p. 5800-5807 <https://doi.org/10.1016/j.jmrt.2025.10.186>

SHS produced TiB₂-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-derived powders by reactions' coupling as primary products for subsequent consolidation

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](#)

Synthesis and characterization of mechanical properties of boron–carbon-based superhard composites

Kommel, Lembit; **Omranpour Shahreza, Babak** Carbon Letters 2023 / p. 1311-1319 <https://doi.org/10.1007/s42823-022-00351-9> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Synthesis of Ti₂AlC MAX phase and Ti₂C MXene by activated combustion

Aydinyan, Sofiya Ceramics international 2024 / p. 12263-12269 <https://doi.org/10.1016/j.ceramint.2024.01.130> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

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.scientific.net/KEM.799.165> <https://doi.org/10.4028/www.scientific.net/KEM.799.165> [Conference proceeding at Scopus](#) [Article at Scopus](#)