

Combustion synthesis and reactive spark plasma sintering of non-equiatomical 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 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>

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>

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](#)

Joint reduction of NiO/WO₃ pair and NiWO₄ 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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The mechanism of joint reduction of MoO₃ and CuO by combined Mg/C reducer at high heating rates

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

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A new synthesis pathway for molybdenum carbide nanopowder by solution combustion

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A novel pathway of solution combustion synthesis of silicon carbide and SiC based composite whiskers

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> [Conference proceedings at Scopus](#) [Article at Scopus](#)

The preparation of high-entropy refractory alloys by aluminothermic reduction process

Kirakosyan, Hasmik; Nazaretyan, Khachik; Kharatyan, Anahit; **Aydinyan, Sofiya** Modern materials and manufacturing 2023 2024 / art. 040012 <https://doi.org/10.1063/5.0189206> [Conference proceedings at Scopus](#) [Article at Scopus](#)

Preparation of nanosize MO₂C by combining solution combustion synthesis with subsequent F

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Rapid and scalable combustion synthesis of (Mo₂/3Y₁/3)2AlC i-MAX as the precursor for vacancy-ordered MXene

Saffarshamshirgar, Ali; **Ivanov, Roman**; **Aydinyan, Sofiya**; Ghosh, Sohan; Chabanais, Florian; Ronchi, Rodrigo M.; Halim, Joseph; Elskova, Anna; Qin, Leiqiang; Nazaretyan, Khachik; **Hussainova, Irina** Journal of Material Science and Technology 2026 / p. 157-169 <https://doi.org/10.1016/j.jmst.2025.09.014>

Study of reduction mechanism of WO₃+CuO mixture by combined Mg/C reducer - influence of high heating rate

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