

LOPS® 2024

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LASERS, OPTICS, PHOTONICS, SENSORS, BIO PHOTONICS & ULTRAFAST NONLINEAR OPTICS

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Biography

Andrei Afanasev currently leads the physics effort for the GWU energy initiative. He has made significant research contributions in the field of nuclear and particle physics probed with high-power electron accelerators and free-electron lasers. Presently Prof. Afanasev contributes to energy research in three areas: (a) High-power particle accelerators that may serve as drivers for accelerator-driven subcritical nuclear reactors (ADSR), as well as probes of new materials for energy applications; (b) Development of novel techniques in photovoltaics, including nanostructures, quantum dots, and surface acoustic waves; (c) New technologies for non-proliferation of nuclear materials. Prof. Afanasev is the Director of the Photoemission Research Laboratory where new solutions for particle accelerator sources and photovoltaics are being developed and tested.

Research Interests: Nuclear & Particle Physics, Physics of Particle Accelerators; Quantum Electrodynamics; Condensed Matter Physics

SPATIALLY STABLE CONSTELLATIONS OF POLARIZATION SINGULARITIES IN THE OPTICAL WAVEFRONTS

Andrei Afanasev

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