

AMULETs –next-generation advanced materials

Thursday 5 June 2025 09:00 (1h 15m)

The development of materials with tailored properties and their seamless integration into functional structures is a cornerstone of modern materials science. The AMULET project advances this field through high-impact, interdisciplinary research with globally significant implications. To achieve this, the AMULET consortium brings together expertise across all critical aspects of complex material engineering and advanced multiscale materials. The project's innovative approach is based on multiscale engineering, combining experimental and theoretical research with the development and production of application-specific materials (AMULETs). These materials undergo precise subnanometer-scale modifications to create universal functional building blocks, which are then non-destructively integrated into multidimensional architectures. This strategy enables the design of next-generation materials with tailored properties and broad application potential. The talk will summarize key aspects of the AMULET research strategy and the most significant achieved results.

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