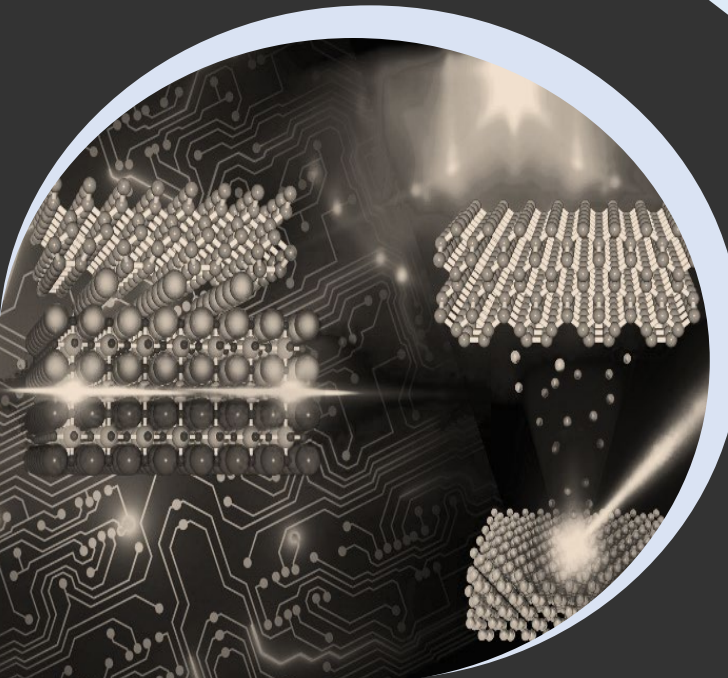
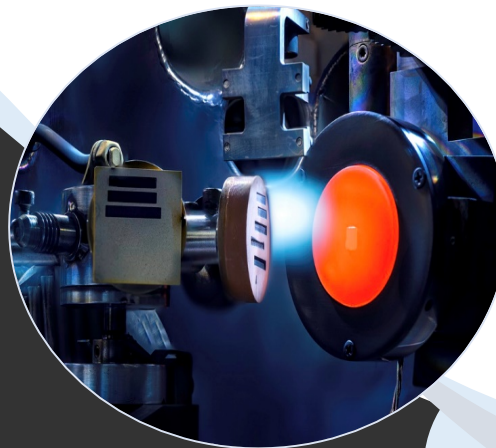


We offer know-how in the field of nanotechnology and contemporary materials for **ELECTRONICS, BIOMEDICINE, ENERGY CONVERSION,** and the **BUILDINGS SECTOR.**

By utilizing the state-of-the-art technologies we investigate various materials in the form of **BULK CERAMICS, THIN FILMS** and **NANOPARTICLES** with the desired crystal structure, chemical composition, microstructure, and morphology.

We are a young and ambitious Team of **ADVANCED MATERIALS DEPARTMENT**

Our core expertise focuses on **MODERN MATERIALS SYNTHESIS** and **ENGINEERING** & **COMPONENTS STRUCTURAL** and **FUNCTIONAL CHARACTERISATION.**



Asst. Prof. Matjaž Spreitzer
Head, AMD
matjaz.spreitzer@ijs.si

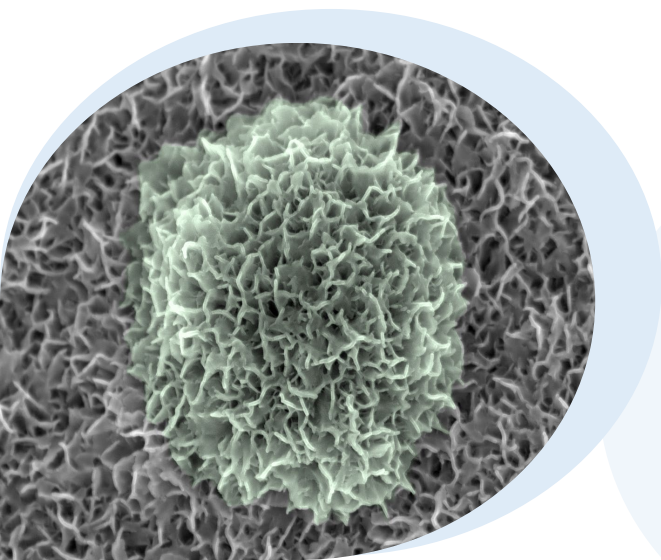
Vesna Butinar, MSc.
Operations & Projects, AMD
vesna.butinar@ijs.si

OUR RESEARCH

focus is based on **lower TRL**, starting from 1 and targeting 4 within the following areas:

- Oxide-semiconductor integration,
- Heterostructures for piezoelectric applications and energy storage,
- Nanoparticles and thin films for photoelectrochemical water splitting,
- Advanced thermal-insulation materials,
- Novel antimicrobial nanotechnologies,
- Organic piezoelectric biomaterials.

We also **DEVELOP** materials for industrial partners at **higher TRL**.



GREEN MATERIALS

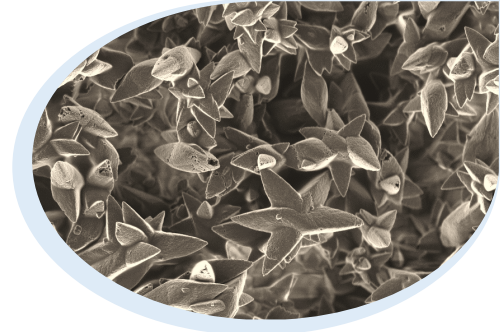
We are continuously searching for new, environmental friendly materials with natural abundance, low toxicity, affordability, and versatility in terms of physical and chemical properties.

TOP EXPERTS

We are working in an international environment with an established network of top experts from academia & industry from various scientific and professional areas.

MODERN FACILITIES

We have access to state-of-the-art research equipment, which enables research excellence and provides capacity in project partnerships and training activities, which is particularly beneficial for young researchers in doctoral training, as well as for postdoctoral fellows, who thus gain gateway to the knowledge exchange with experts from various fields.



CLEAN TECHNOLOGIES

With our activities, we provide an advantage for Europe in the future, where clean technologies will be indispensable.

CIRCULAR ECONOMY

We strive to develop durable, energy-efficient recycled materials with a low carbon footprint during their processing.