SINTERING OF NOVEL STRUCTURES FOR ALLOYS WITH INCREASED FUNCTIONALITY

Goal of the project

The proposed research involves collaboration based on the complementary experience of the two groups for obtaining sintered materials (including porous or gradient) from the intelligent material family. Focusing is on emphatic forms of the form, including biocompatible (from the NiTi family).

Short description of the project

The collaboration will use the experience of the research groups in Romania and China for the development of new technologies in order to manufacture high-performance intelligent materials.

Project implemented by

- Politehnica University Timişoara
- University of Science and Technology Beijing

Implementation period

2018 - 2019

Main activities:

1. Preparation and characterization of complex metal powders
2. Identify the compatibility between the potentially usable components in making porous structures
3. Establishing technologies for making sintered materials
4. Making and characterization of sintered materials.

Results

Expected results:
- Metal powders and mechanical alloying;
- Couples of materials for porous structures;
- Components with controlled geometry for porosity;
- Conventional, plasma and laser sintering technologies;
- Characterized materials;
- Dissemination.

Applicability and transferability of the results

The results can be applied in the biomedical industry

Financed through/by

UEFISCDI – Romania-China bilateral partnerships

Research Centre

Smart Materials Laboratory

Research team

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