Laboratory of Materials Physics

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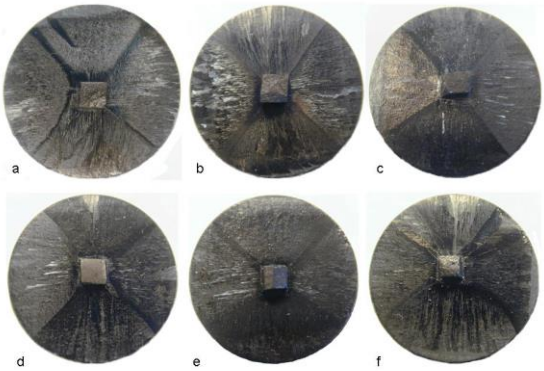
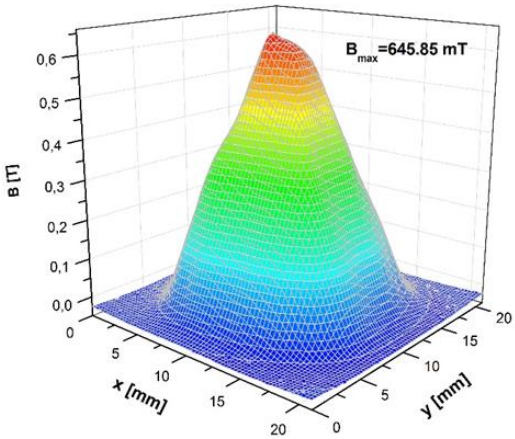
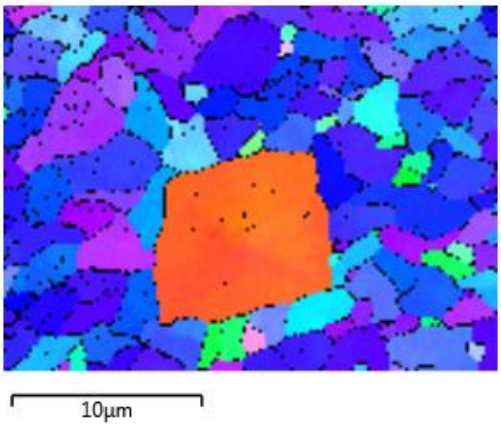
Scientific program
- Bulk superconductors
- Heusler alloys (cooperation with UPJŠ, Prof. S. Varga)
- Microscopic methods of material analyses (SEM, EDS, WDS)
- Diffraction methods of material analyses (X-Ray, EBSD)

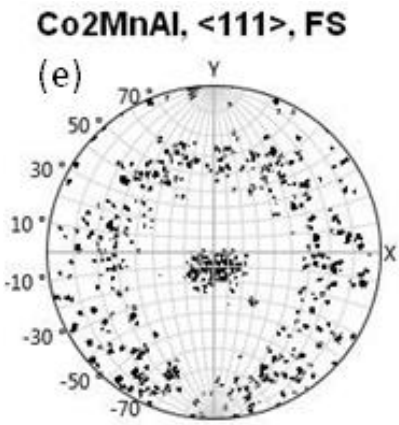
Experimental equipment
- Ceramic technologies (mils, press, glow-box, chamber and tube furnaces with controlled atmosphere)
- Laser granulometer
- Preparation of metallographic samples (cutting, embedding, grinding and polishing)
- Optical microscopy
- X-ray analyses (details in "X-ray diffraction laboratory")
- Scanning Electron Microscopy (EDAX, WDX, EBSD - details in "Laboratory of Electron Microscopy"),
- Thermal analyses (details in "Laboratory of thermal analyses)
- Equipments for measurement of trapped magnetic field and levitation force





The set of single-grain YBCO bulk superconductors prepared in one cycle and the profile of trapped magnetic field at 77 K in the YBCO sample with addition of $BaCeO_3$ nanoparticles.





The inverse and standard pole figures (EBSD) of the ribbon of Heusler alloy Co_2MnAl prepared by melt spinning.