

MÖSSBAUER SPECTROSCOPY

Mössbauer Spectroscopy (MS) is extremely precise, non-destructive gamma spectroscopy method, which is capable of investigating both physical and chemical structure information. MS is capable to analyze samples with low-concentrations of specific nuclei. MS is statistical method, thus sample measurement can take few days. Spectrometers - MS96 - for these analyzes are developed in our laboratories.

ACQUIRED INFORMATION

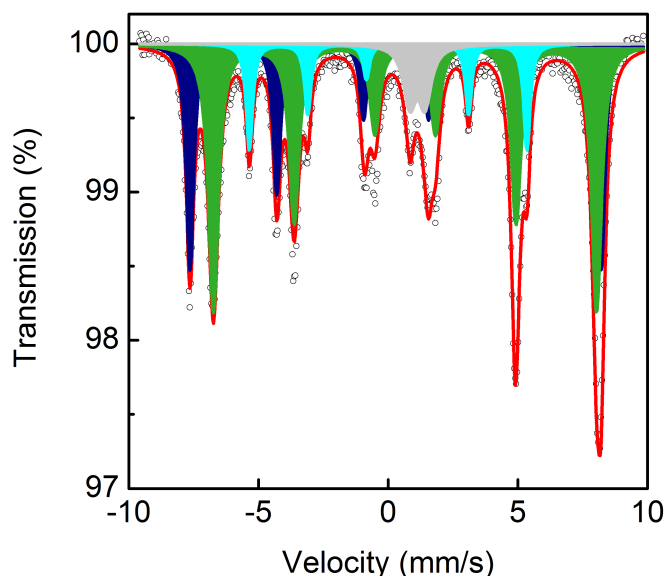
- > Determination and qualification of phase composition
- > Determination of valence and spin states of atoms
- > Differentiation of structure positions of iron atoms
- > Stoichiometry examination of cation substitution
- > Magnetic state determination
- > Local configuration of magnetic moments of the atoms
- > Determination of magnetic properties including temperatures of magnetic junctions
- > Mechanism and kinetics of reactions, phase transformances

SAMPLE TYPES

- > Bulk or powdered solid material
- > Liquids and solutions are suitable in frozen state
- > Size limitation depends on type of measurement
- > Only ^{57}Fe and ^{119}Sn forms can be analyzed

MODES, CONDITIONS AND PRECISION

- > The resolution of surface and volume analysis
- > High / Low temperature measurements (1.5 K to 1300 K)
- > Inert / Oxidating / Reducing atmosphere
- > External magnetic field up to 8 T
- > Backscattering / Forwardscattering geometry
- > Conversion Electron / X-Ray spectrum detection
- > Time differential MS (for low distinguishable phases)
- > Velocity interval up to ± 40 mm/s
- > Non-linearity less than 1%
- > Line-width less than 0.28 mm
- > Spectrum interpretation service



DETAILED INFORMATION ON REQUEST



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