HIGH-TECH SYSTEMS AND MATERIALS

November 15-16, 2012
16:15 – 17:45

PROPOSED THEMES / PROJECT IDEAS FOR DISCUSSION:

1. Lazer technologies: industrial process diagnostics, hardfacing and coating technologies
2. Joint research projects in

- Absorption and catalytic properties of oxide and metal catalysts
- Structural and electronic features and elemental composition of metal surfaces prior to and after absorbing gaseous substances. Examination of active centers in metals and catalysts of various nature.
- Medical materials science
- Synthesis of new compounds to be used in food and pharmaceutical industry
- Development of medical diagnostic systems and medical treatment systems through identification of molecular cell and target cells

3. Launch of exchange programs in the following fields:

- Identification of the specific surface area and solid body porous structure examination using gas absorption methods
- Active organic compounds purification methods
- Examination of gas and thin mixture using gas -liquid chromatography-based procedure
- Membrane separation techniques used for separating complex mixtures in organic compounds
- Basic heterogeneous catalysis: synthesis, physical and chemical properties and the area of utilization
- Examination of properties and reactivity of the solid body surface using the non-isometric kinetic models

4. Nanosystems, natnotechnologies and nanomaterials
5. Research conducted to develop a new generation of devices used in radio engineering, optoelectronics, power electronics; materials and coatings with unique properties, new building and construction materials, and energy saving technologies that can be used to produce the materials. Development of chemical engineering technology to be used for synthesizing new compounds bearing practically useful properties
6. New products and devices engineering

COOPERATION FORMATS:

- Joint Master Programs.
- Mobility of students, young researchers, including special events (schools etc.).
- Sustainable cooperation in education processes on the regular base (including network universities etc.).
- Exchange/internship programs

MODERATORS:

Robert Hartman, ASML

PARTICIPANTS:

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