

Invited-

Ions in materials testing

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Materials testing is always present in scientific investigations as well as in practical applications of different materials.

We have to know and be able to determine materials properties in situations as for example: (i) properties changes as the result of applied treatments or work in different environments, (ii) define requirements for special application and develop new material with tailored properties.

There is a lot of methods for materials investigations and testing. Methods on the base of ions application can deliver new and more detailed information about structure, composition and others. Techniques mainly differ by what is sent in versus what is collected out.

Examples of testing techniques used ions beams like: Rutherford Backscattered Spectroscopy (RBS), Secondary Ion Mass Spectrometry (SIMS), ion beam induced charge (IBIC) for example and other applications: ion cleaning and ion beam etching for example will be presented.