IFIN-HH

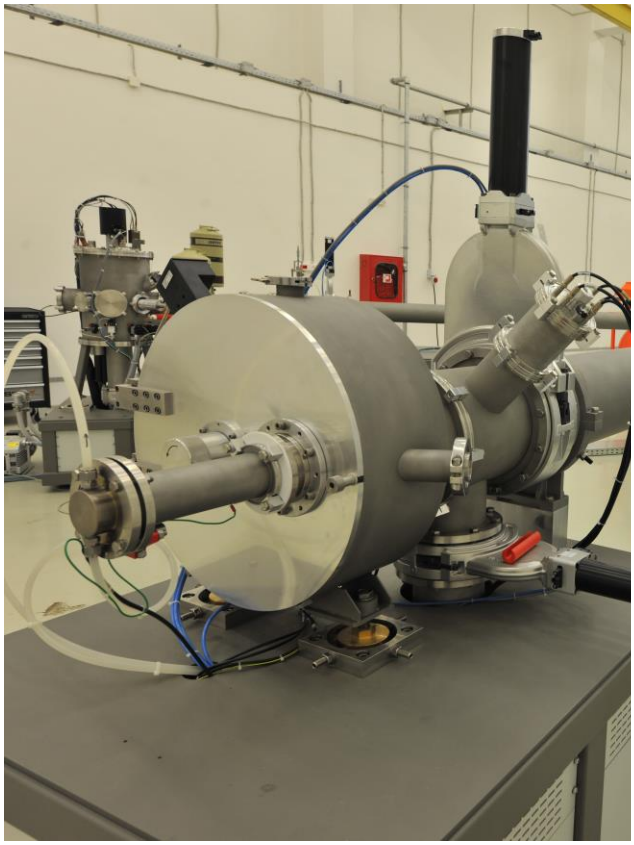
Center for Technology Transfer and Marketing

CTTM

ION BEAM IMPLANTATION

DESCRIPTION

Ion beam implantation technology provide the most efficient way to insert impurities into different materials, especially crystal structure materials in order to change their physical, chemical and electrical properties. It is a material engineering process that allows creation of new materials, atomic mixing, metal finishing etc. Our 3 MV Tandetron accelerator can be used as a high depth industrial implanter that can implant nearly every type of atom. If implantation is done in crystalline structures, we can check for induced damage and perform crystal regeneration.



APPLICATION DOMAINS

Material engineering, material sintering.

MAIN ADVANTAGES

Ion beam implantation can be used to create new materials by impurities insertion or atomic mixing. We can control exactly the amount of implanted material and can do so at various controlled depths. We also have a channeling-based analysis chamber which can be used for quality check control.

POTENTIAL CUSTOMERS OR COMMERCIAL APPLICATIONS

Institutes of companies that develop and manufacture advanced materials, creation of new materials.

KEYWORDS

Ion beam implantation, high energy implanter, ion implanter, crystal damage analysis, crystal regeneration.

CONTACT

Dr. Dan Gabriel Ghiță

Scientific Researcher

Head of Tandem Accelerators Department Horia Hulubei National Institute for R&D in Physics and Nuclear Engineering

+40746126492

dan.ghita@nipne.ro