With fast ions faster to fusion energy
Use of micro-IBA to study of fuel and impurities species migration and retention in fusion reactors

Mitja Kelemen,
Department of low and medium energy physics – F2, Jožef Stefan Institute
Jožef Stefan International Postgraduate School

Poster number: 14
$^2\text{H}$ $^3\text{H}$

$^4\text{He} + 3.5 \text{ MeV}$

$n + 14.1 \text{ MeV}$
One of critical issues is accumulation of fusion fuel in the inner wall of fusion reactor.
Studies of fuel retention with ion beam analytical (IBA) method

INSIBA- time evolution studies of fusion fuel retention via simulating reactor conditions
Microbeam experiment allows us to perform postmortem analysis of impurities and fusion fuel migration with high lateral resolution up to 500 nm.

Fast ions provide powerful nondestructive and quantifiable analytical tool for study processes of fusion fuel and impurity retention and migration in materials used in fusion reactors.