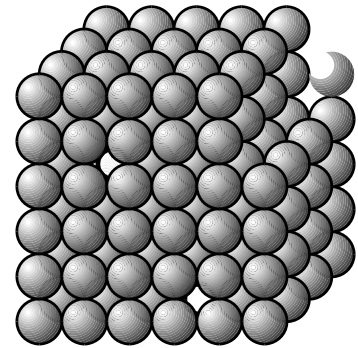


Future opportunities for using position-sensitive detectors and radioisotopes produced at HIE-ISOLDE

U. Wahl^{1,2}, J.G. Correia^{1,2,3}, H. Hofsäss⁴, U. Vetter⁴, A. Vantomme⁵,
S. Decoster⁵, J.P. Araújo⁶, L. Pereira^{1,5,6}, E. Alves^{1,2}, K. Lorenz^{1,2}, V. Darakchieva^{1,2}, C.P. Marques¹, N.
Catarino¹, L. Amorim², M.R. da Silva², K. BharuthRam⁷



EMISSION CHANNELING

MAJOR FIELD OF APPLICATIONS:

Lattice location of dopants and impurities in
semiconductors and oxides

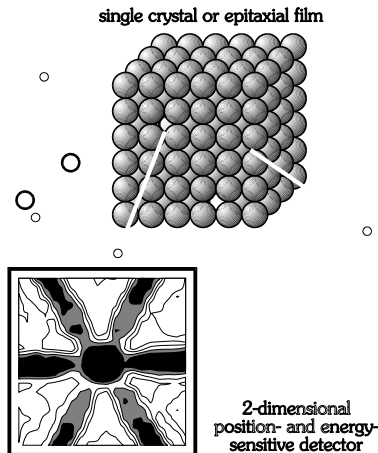
^{59}Fe (β) in Si

$\langle 110 \rangle$ axis view

as implanted
Fe @ Si sites
0.5 Å
displaced

$T_A = 300\text{ }^\circ\text{C}$
Fe @
tetrahedral
interstitial

$T_A = 800\text{ }^\circ\text{C}$
Fe @ Si sites
ideal sites



- **FUTURE:**
CERN MediPix and TimePix
512 x 512 pixel detectors

New perspectives at HIE-ISOLDE

- **EC-SLI has been used for a variety of radioisotopes, but not all elements are available at ISOLDE.**
- Beam development for some others is encouraged!

