

Modifications induced by swift heavy ions

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On their way through matter, energetic heavy ions induce a continuous trail of ionization and excitation. A narrow path of irreversible physical, chemical and structural changes, the latent track, is formed. In this report, some of the most important techniques (transmission electron and atomic force microscopy, small-angle X-ray scattering, chemical etching) to study and to characterize ion induced modifications will be presented. Furthermore, selected examples for application oriented projects will be given.