

## **Morphological study on ion-irradiated organic single crystals using scanning force microscopy**

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Three different varieties of organic crystals have been irradiated with GeV energy ions leading to a range of electronic energy loss in the crystal. Scanning force microscopy studies on the irradiated surfaces reveal two different defect morphologies, i.e., either hillocks or craters. The defect morphology depends exclusively on the electronic energy loss of ions. For the same crystal namely, benzoyl glycine, hillocks are produced at an energy losses less than 4 keV/nm, and above this value upto 15 keV/nm craters are produced. The probability of formation of these defects is also found to depend on the amount of energy deposited. It is estimated that about  $10^4$  molecules are sputtered out from each crater. The observation sheds light on the ion-induced sputtering in organic materials and the mechanism of damage creation.