

Laboratory studies on cosmic dust processing in the ISM

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The condensation as well as the processing of main dust components in astrophysical environments is still a matter of debate. Laboratory experiments combined with structural analyses are necessary to get more insight into the formation pathways and chemical-structural modification of solid grains in different astrophysical environments. We present recent results of laboratory work on UV and ion irradiation of cosmic dust that has substantially improved our understanding of cosmic dust processing in space. The modification of the spectral properties due to structural and compositional processing of dust will be demonstrated.