Metamorphism of diamonds in planetary environment - kinetics of its destruction -

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We discuss the physico-chemical raw processes which might take place during the metamorphism of diamonds in several planetary objects. Diamonds in meteorite are identified in chondrites, ureilites, and iron meteorites. There are some parameters in destruction of diamond, for example, grain size, combustion temperature, oxygen pressure, and combustion time. Grain sizes of diamond in three kinds of meteorites differ by three orders of magnitude.

In this work, stepwise heating experiment of three size fractions of artificial diamonds were carried out. We discuss the influence of oxygen pressure to the combustion temperature of diamond.