



Polycrystalline Varieties of Diamond

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Deadline for manuscript
submissions:

closed (1 December 2021)

Message from the Guest Editor

There are several types of polycrystalline varieties of diamond: bort, diamondite, balas, carbonado, yakutite, and some others. They have different forms, structures, carbon and nitrogen isotope characteristics, and modes of origin. Unlike monocrystalline diamonds, formed within mantle rocks and transported to the Earth's surface by kimberlite/lamproite pipes, bort and diamondite may form within kimberlite and lamproite magmas; lonsdaleite-bearing yakutite is a product of an impact process as a result of a meteorite hitting the Earth; and carbonado, most likely, crystallises under low-pressure conditions out of the “classical” diamond stability P - T field. Recently, aggregates of diamond were identified in products of volcanic eruptions. Various models have been offered to explain the origin of these polycrystalline varieties of diamond, and some of them remain enigmatic. A Special Issue plans to present new data on polycrystalline varieties of diamond and new hypotheses on their origin.





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Message from the Editor-in-Chief

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