

graphitization

A solid-state transformation of thermodynamically unstable *non-graphitic carbon* into *graphite* by means of heat treatment.

Notes:

Graphitization is also used for the transformation of metastable *diamond* into graphite by heat treatment, as well as in metallurgy for the formation of graphite from thermodynamically unstable carbides by thermal decomposition at high temperatures. Such uses of the term graphitization are in line with the above definition. The use of the term graphitization to indicate a process of thermal treatment of *carbon materials* at $T > 2500$ K regardless of any resultant crystallinity is incorrect.

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