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intercalation reaction

Also contains definition of: insertion reaction

Reaction, generally reversible, that involves the penetration of a host material by guest species without causing a major structural modification of the host.
Notes:

1. Intercalation can refer to the insertion of a guest species into a one-, two- or three-dimensional host structure.
2. The guest species is not distributed randomly but occupies positions predetermined by the structure of the host material.
3. Examples of intercalation reactions are the insertion of lithium into layered TiS_2 [Li_xTiS_2 ($0 \leq x \leq 1$)] and of potassium into the layers of graphite (C_8K).

Source:
PAC, 2007, *79*, 1801 *(Definitions of terms relating to the structure and processing of sols, gels, networks, and inorganic-organic hybrid materials (IUPAC Recommendations 2007))* on page 1823

