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Reversible structural transformations of rubidium and cesium amidoboranes

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Abstract

Rubidium and cesium amidoboranes were obtained using a reaction of the respective alkali metal with ammonia borane in THF solution at 0 °C. Both solid compounds undergo a reversible phase transition before irreversible thermal decomposition with hydrogen evolution, as illustrated by STA, PXRD and NMR measurements.

Graphical abstract

Rubidium and cesium amidoboranes undergo reversible phase transitions before an irreversible decomposition with hydrogen evolution.



Keywords:

Rubidium, cesium, amidoboranes, phase transition, DSC, NMR

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