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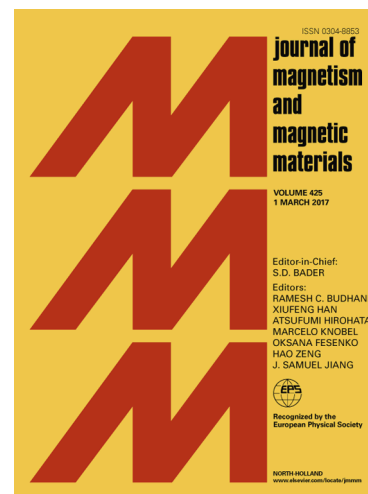
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Effect of cerium on the corrosion behaviour of sintered (Nd,Ce)FeB
magnet

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Abstract: For the balanced consumption of rare-earth elements, cerium (Ce) was partially used for NdFeB magnets instead of Nd. The corrosion behaviour of the (Nd,Ce)FeB magnet with different Ce contents in 3.5% NaCl solution was investigated by SEM, XRD, EDS and electrochemical tests. After immersion, the weight loss was calculated and the magnetic properties of the samples were measured. Results showed that Ce affected the corrosion of the (Nd,Ce)FeB magnet. Compared with the NdFeB magnet without Ce but of the same grade as the magnetic energy product, (Nd,Ce)FeB magnet showed better corrosion resistance. With increased Ce content, the corrosion resistances and magnetic properties of (Nd,Ce)FeB magnets were investigated.

Keywords: NdFeB; Ce; corrosion; magnetic property

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