Hydrogen generation Technique with Metal Oxid

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The thermal behavior of $NiFe_2O_4$ prepared by a solid-state reaction was investigated for H_2 generation by the thermochemical cycle. The Oxygen release in $NiFe_2O_4$ started from 600 ℃. In the H_2O decomposition reaction, H_2 was generated by oxidation of reduced $NiFe_2O_4$. The XRD study showed no change in spinel structure of $NiFe_2O_4$ after the redox reaction. The total H_2 volume evolved after 5cycle reaction was 1.01cm^3/g. Therefore, $NiFe_2O_4$ showed a good redox reactivity and durability in thermochemical cyclic reaction.