

# Hydrogen generation by hydrolysis reaction using Magnesium alloys with Long Period Stacking Ordered structure

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## Supplementary material

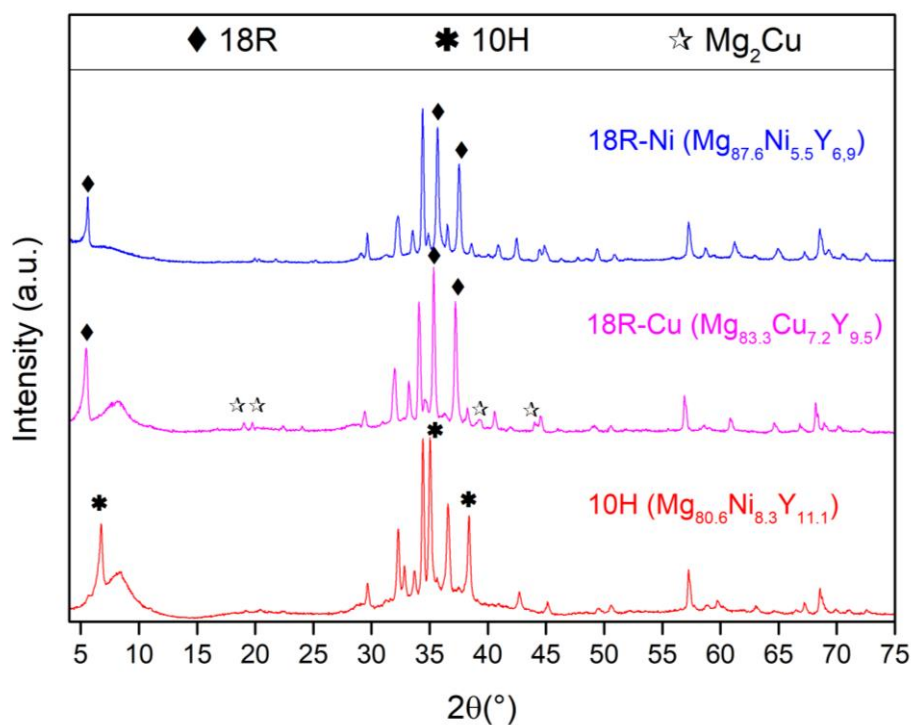


Figure S1 X-Ray diffraction patterns of 18R-Ni (Mg<sub>87.6</sub>Ni<sub>5.5</sub>Y<sub>6.9</sub>) (top), 18R-Cu (Mg<sub>83.3</sub>Cu<sub>7.2</sub>Y<sub>9.5</sub>) (middle) and 10H (Mg<sub>80.6</sub>Ni<sub>8.3</sub>Y<sub>11.1</sub>) (bottom).

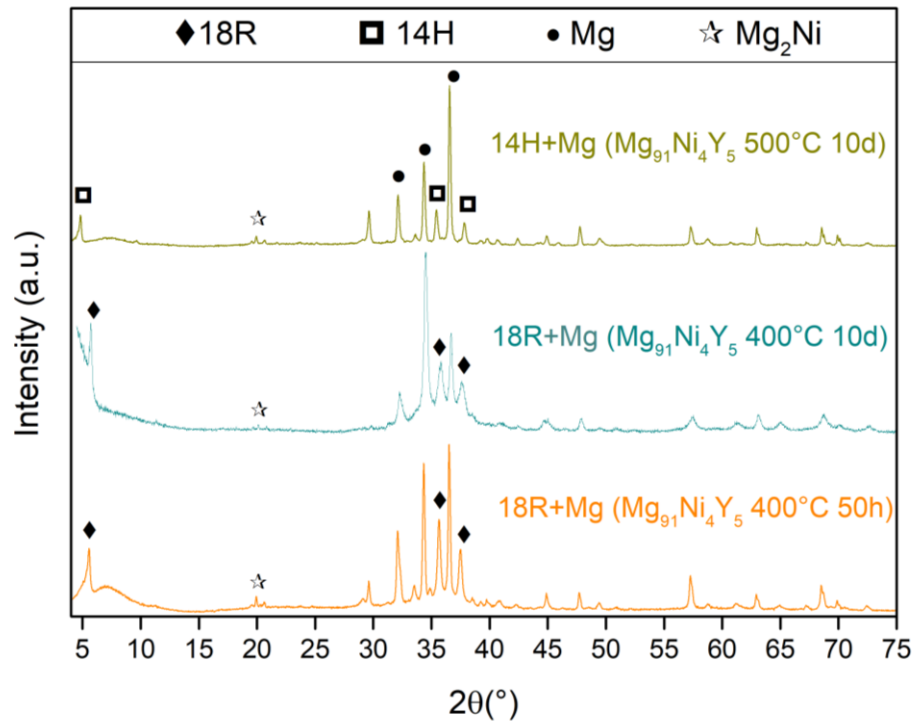


Figure S2 X-Ray diffraction patterns of  $Mg_{91}Ni_4Y_5$  alloys: 14H+Mg (500°C 10d) (top), 18R+Mg (400°C 10d) (middle) and 18R+Mg (400°C 50h) (bottom).

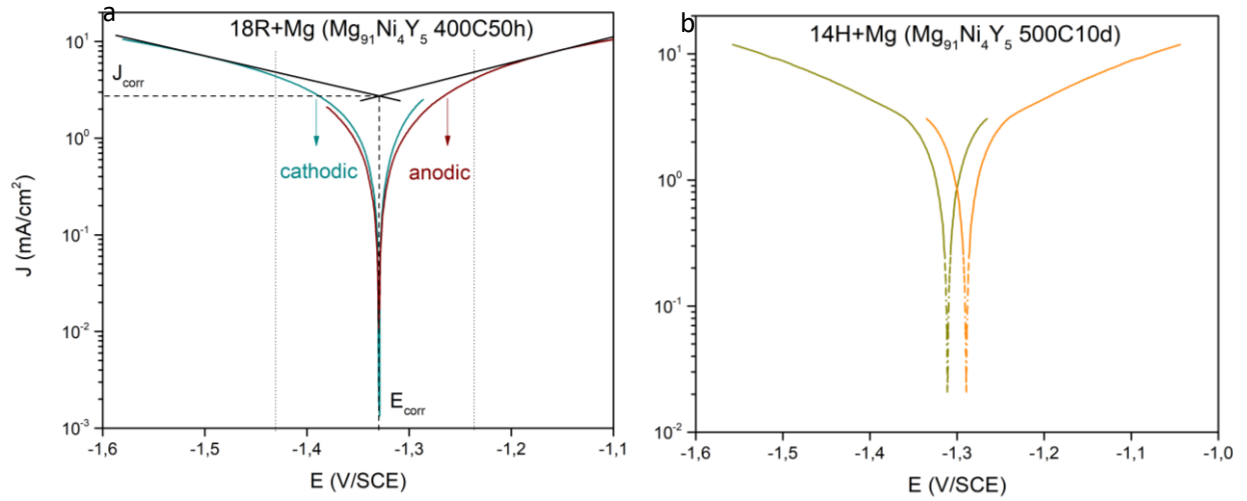


Figure S3 Potentiodynamic polarization curves for  $Mg_{91}Ni_4Y_5$  (a) 400°C 50h and (b) 500°C 10d in 35g/L NaCl solution.