

The "uphill" diffusion of hydrogen: strain-gradient-induced effects in palladium alloy membranes

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Abstract

Certain unexpected effects observed during developments and reductions of pressures of hydrogen gas inside tubular membranes of palladium alloys now seem to be self-consistently interpretable in terms of lattice-strain-induced temporary "uphill" hydrogen diffusion processes.

Indexed keywords

Engineering controlled terms: GASES - Pressure Effects; MEMBRANES - Materials; PALLADIUM AND ALLOYS

Engineering uncontrolled terms: DIFFUSION-ELASTIC EFFECTS; GORSKY EFFECT; INTERSTITIAL LATTICE SITES; STRAIN-GRADIENT-INDUCED EFFECTS; TUBE WALL; UPHILL DIFFUSION

Engineering main heading: HYDROGEN