Interfaces between ionic solids and nanometals seem to provide an environment that promotes Bloch deuterium with 2-dimensional lattice symmetry. Electrolysis-loaded powdered ZrO$_2$ + nanoPd composite produced 10-W excess heat for 400 hr ($1.4 \times 10^7$ J).¹ This compares with best plasma fusion runs of 16 MW of fusion heat for $\leq 1$s ($\leq 1.6 \times 10^7$ J). The fusion heat was less than the input energy).² In 2004, Arata and Zhang pressure-loaded ZrO$_2$ + nanoPd with D$_2$ at 140 °C and produced an estimated steady 0.6 W of fusion heat.³,⁴ The ionic oxide + nanometal composites absorb abnormal amounts of hydrogen gas.⁵

²C. Cookson, Financial Times, Energy Section, 14 (9 Nov. 2007).