

Abstract Submitted  
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**Bloch-Sensitive Nuclides** TALBOT A. CHUBB, Physicist Consultant, 5023 N 38th St., Arlington, VA — Documented condensed matter nuclear science includes Fleischmann and Pons radiationless dd fusion reactions, Iwamura alpha-addition transmutations, and Oriani MeV particle showers. All require partitioned coherent matter in which fractions of each single “wave like” particle are entangled<sup>1</sup>. If the work required to bring side-by-side deuterons into contact is somehow reduced enough, an energy-minimizing 2-body anti-correlation form of wave function replaces the “molecule” configuration, allowing cold fusion. In the Iwamura process, a second fusion step fuses 2 spin-zero  ${}^4\text{He}^{2+}_{Bloch}$  ions to form  ${}^8\text{Be}^{4+}_{Bloch}$ . The nuclear ground state energy of the product nucleus is a function of the number of fragments into which it is partitioned. It is “Bloch sensitive”, i.e., its energy level is a function of  $N_{well}$ , the number of potential wells into which the  ${}^8\text{Be}^{4+}_{Bloch}$  is partitioned. The dependence of energy on lattice parameter  $N_{well}$  strongly couples nuclear and electromagnetic forces at the boundary of the coherently ordered volume, causing energy transfer to the lattice.

<sup>1</sup>T. A. Chubb, “Bloch Nuclides, Iwamura Transmutations, and Oriani Showers”, ICCF11 Abstract

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