

Abstract Submitted
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Low Energy Nuclear Reactions: 2007 Update STEVEN B. KRIVIT,
New Energy Times, 11664 National Blvd. #142, Los Angeles, CA 90064 — This
paper presents an overview of low energy nuclear reactions, a subset of the field of
condensed matter nuclear science. Condensed matter nuclear science studies nu-
clear effects in and/or on condensed matter, including low energy nuclear reactions,
an entirely new branch of science that gained widespread attention and notoriety
beginning in 1989 with the announcement of a previously unrecognized source of
energy by Martin Fleischmann and Stanley Pons that came to be known as cold
fusion. Two branches of LENR are recognized. The first includes a set of reactions
like those observed by Fleischmann and Pons that use palladium and deuterium
and yield excess heat and helium-4. Numerous mechanisms have been proposed to
explain these reactions, however there is no consensus for, or general acceptance of,
any of the theories. The claim of fusion is still considered speculative and, as such,
is not an ideal term for this work. The other branch is a wide assortment of nuclear
reactions that may occur with either hydrogen or deuterium. Anomalous nuclear
transmutations are reported that involve light as well as heavy elements. The signif-
icant questions that face this field of research are: 1) Are LENRs a genuine nuclear
reaction? 2) If so, is there a release of excess energy? 3) If there is, is the energy
release cost-effective?

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