This article was downloaded by:

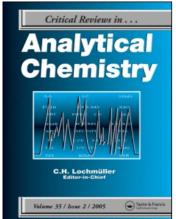
On: 17 January 2011

Access details: Access Details: Free Access

Publisher Taylor & Francis

Informa Ltd Registered in England and Wales Registered Number: 1072954 Registered office: Mortimer House, 37-

41 Mortimer Street, London W1T 3JH, UK



Critical Reviews in Analytical Chemistry

Publication details, including instructions for authors and subscription information: http://www.informaworld.com/smpp/title~content=t713400837

Green Chemistry Invitiaties at Los Alamos National Laboratory

Dennis L. Hjeresen

Online publication date: 03 June 2010

To cite this Article Hjeresen, Dennis L.(1999) 'Green Chemistry Invitiaties at Los Alamos National Laboratory', Critical Reviews in Analytical Chemistry, 28: 4, 348-349

To link to this Article: DOI: 10.1080/10408349891199176 URL: http://dx.doi.org/10.1080/10408349891199176

PLEASE SCROLL DOWN FOR ARTICLE

Full terms and conditions of use: http://www.informaworld.com/terms-and-conditions-of-access.pdf

This article may be used for research, teaching and private study purposes. Any substantial or systematic reproduction, re-distribution, re-selling, loan or sub-licensing, systematic supply or distribution in any form to anyone is expressly forbidden.

The publisher does not give any warranty express or implied or make any representation that the contents will be complete or accurate or up to date. The accuracy of any instructions, formulae and drug doses should be independently verified with primary sources. The publisher shall not be liable for any loss, actions, claims, proceedings, demand or costs or damages whatsoever or howsoever caused arising directly or indirectly in connection with or arising out of the use of this material.

Green Chemistry Initiatives at Los Alamos National Laboratory

Dr. Dennis L. Hjeresen
Senior Program Manager
Environmental Management Programs
Los Alamos National Laboratory
Los Alamos, NM 87545
Phone (505) 665-7251
FAX (505) 665-8118
e-mail: dennish@lanl.gov

Los Alamos National Laboratory is working with the U.S. Environmental Protection Agency (EPA) and the U.S. Department of Energy to promote fundamental breakthroughs in chemistry that accomplish pollution prevention and energy conservation through source reduction and are useful to industry. Green Chemistry is defined as the use of chemical principles and methodologies for source reduction. The Los Alamos Green Chemistry Program encompasses all aspects and types of chemical processes---including synthesis, catalysis, analysis, monitoring, separations, and reaction conditions---that reduce impacts on human health, energy consumption, and the environment relative to the current state of the art.

In this talk I will focus on processes to replace conventional hazardous organic solvents with specific applications in waste treatment, cleaning, catalysis, waste minimization, and materials processing. This discussion will explore both chemical studies at Los Alamos and the development of a national and international program in Green Chemistry.

I will discuss LANL Green Chemistry studies that include applications in

- 1. Cleaning
- 2. Extraction/Separation
- 3. Polymer Synthesis and Processing
- 4. Materials Synthesis and Modification
- 5. Chemical Synthesis and Catalysis
- 6. Delivery Technologies
- 7. Reaction Engineering
- 8. Theory, Computation, and Modeling
- 9. Equipment Technology

I will focus portions of the presentation on the application of Green Chemistry principles in radioactive materials processing and waste minimization as well as to the cleanup of nuclear waste.