University of Wisconsin–Madison
Department of Physics

1995 Julian E. Mack Lecture

From Atomic Collisions and Spectroscopy to Medical Imaging

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Basic research on atomic collisions and spectroscopy has permitted the production of a good fraction of a mole of ^{3}He or ^{129}Xe gases with laser-enhanced nuclear spin polarizations of 50% or more. These gases are already being used to study the lungs of small animals with magnetic resonance imaging machines, and they will soon be used to image human lungs. The speaker will review the basic physics that had to be understood before successful production of these gases was possible, and he will stress how important it is to protect basic research if continued technological progress is to be made.

Friday, May 5, 1995

4:00 P.M. • 1300 Sterling Hall