

18



24



32



Feature Articles

18 The road to wellness: The task of getting lifesaving medical isotopes to patients

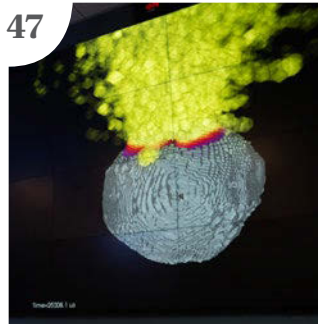
24 Taking aim at disease: Radioisotopes target cancer, improve imaging, and have myriad other medical uses

32 Wayne Newhauser: A study on the professional radiation workforce

41



47



55



60



Insight & Opinion

4 Nuclear Notes

Study up

6 Atoms

Nuclear science at the center

8 Leaders

The reality of radiation

78 Opinion

Can uranium extraction from seawater make nuclear power completely renewable?

88 Nuclear News Asks

What is involved in radiation protection at accelerator facilities?

Headlines

12 Nuclear Trending

36 Power & Operations

44 Research & Applications

50 Waste Management

56 Education

60 History

64 ANS News

Community Updates

71 Industry

76 Standards

77 Index to Advertisers

82 People

84 Calendar

86 Recently Published

87 ANS Journals

Editorial

Director of Publications John Fabian

Publisher/Editor-in-Chief Rick Michal

Staff Writers

Susan Gallier, Tim Gregoire,
Dot Schneider, Amelia Tiemann

Contributor A. J. Smuskiewicz

Copy Editors David Strutz, Mary Tong

Graphic Design Specialist Chris Salvato

Contributing Designers Jay Bogardus, Lisa Dagley

Advertising & Circulation

Director of Advertising and Sponsorships Jeff Mosses

Advertising Production Specialist Erica McGowan

Editorial Advisory Committee

Jess C. Gehin, John G. Gilligan,
Lawrence E. (Larry) Boing, Dale Vines

ANS Officers

President Kenneth Petersen

Vice President/President-Elect Lisa Marshall

Treasurer Harsh Desai

Chairman, ANS Publications Steering Committee
Xiaodong Sun

Administrative

Executive Director/Chief Executive Officer
Craig Piercy

ANS Headquarters

General Information

askanything@ans.org
708/352-6611 | Fax 708/579-8314 | ans.org

Nuclear News Advertising

708/579-8225 | 708/579-8226
ans.org/advertising/ | advertising@ans.org

Nuclear News Editorial

708/579-8216 | nucnews@ans.org | ans.org/nn

Nuclear News (ISSN: 0029-5574), Volume 67, Number 2. Published monthly (except during the month of April when issued twice monthly) by the American Nuclear Society, Incorporated, with business, executive, and editorial offices at 5200 Thatcher Road, Downers Grove, Illinois 60515; telephone 708/352-6611. Subscription rate for 2024 is \$725, which includes complimentary electronic access, 1959 to current issue; for subscriptions outside North America, add \$80 for shipping and handling. Alternatively, subscription rate is \$635 for Electronic Access Only, 1959 to current issue. Single copy price (regular monthly issues) is \$52; add \$12 for postage and handling if being shipped to address outside North America. Single copy price for annual mid-April Buyers Guide is \$125; add \$15 for postage and handling if being shipped to address outside North America. Individual ANS members receive *Nuclear News* as part of membership. Replacement copies may be obtained at the single copy price, as long as copies are available. Inquiries about the distribution and delivery of *Nuclear News* and requests for changes of address should be directed to the American Nuclear Society. Allow six weeks for a change to become effective. POSTMASTER: Send change of address orders to *Nuclear News*, American Nuclear Society, 5200 Thatcher Road, Downers Grove, Illinois 60515, or nucnews@ans.org.

Nuclear News is printed in New Richmond, Wis. 54017, by St. Croix Press, Inc. Nonprofit periodicals postage paid at La Grange, Illinois, and at additional mailing offices. Copyright © 2024 by the American Nuclear Society, Inc. Trademark registered in USA and Canada. Opinions expressed in this publication by the authors are their own and do not necessarily reflect the opinions of the editors, the American Nuclear Society, or the organizations with which the authors are affiliated, nor should publication of author viewpoints or identification of materials or products be construed as endorsement by this publication or by the Society.

Texts of most *Nuclear News* articles are available on the LexisNexis database, from Mead Data Corporation.