

Nuclear News Index to Volume 61 (2018)

The following listing provides an index to feature stories, authors, special sections, regular columns, and meeting reports published in the 2018 issues of *Nuclear News*.

• *Indicates articles in special section*

Feature Index

January

Nuclear News Index to Volume 60 (2017), p. 12

(A brief index listing of *NN* features, authors, special sections, regular columns, and meetings of 2017)

SPECIAL REPORT: 2017 ANS Winter Meeting, pp. 43–58

• Building for tomorrow, by Tim Gregoire, Dick Kovan, and Kaitlin Schuler, pp. 43–54
(A report on the 2017 ANS Winter Meeting, held October 29–November 2 in Washington, D.C.)

• Topical Meeting: Young Professionals Congress, by Kaitlin Schuler, p. 55
(ANS's Young Members Group and the North American Young Generation in Nuclear sponsored a full day of sessions geared toward young nuclear professionals.)

February

SPECIAL SECTION: Capabilities of the Nuclear Science User Facilities, pp. 35–66

• Nuclear Science User Facilities: Driving nuclear research, by Rory Kennedy and Laura Scheele, p. 36
(Established by the Energy Policy Act of 2005, the NSUF now offers users across the country access to capabilities for the irradiation testing of nuclear fuels and materials.)

• Nuclear Science User Facilities Capability Areas, p. 39

• The NSUF: Shaping the future of nuclear research, by Simon Pimblott, p. 43
(The Nuclear Science User Facilities helps sustain the U.S. fleet of operating reactors and the development and deployment of advanced reactors by furthering studies of irradiated materials in an operating environment.)

• Information management tools for fuels and materials research, by Brenden Heidrich, p. 49

(The Nuclear Energy Infrastructure Database and the Nuclear Fuels and Materials Library provide a wealth of data for a wide range of researchers through the use of modern information management tools.)

• ORNL: Providing access to nuclear infrastructure, expertise, by Kory Linton, Philip Edmondson, Christian Petrie, Chris Bryan, and Kurt Terrani, p. 54

(Irradiation experiment design, neutron and gamma irradiations, cask transportation management, and post-irradiation examination are some of the lab's capabilities made available as an NSUF partner facility.)

• The MIT research reactor: An early NSUF partner facility, by Leda Zimmerman, p. 59

(Celebrating its 60th birthday in 2018, MITR specializes in first-of-a-kind experiments.)

• Synchrotron radiation, Illinois Tech, and the Nuclear Science User Facilities, by Jeff Terry, p. 62

(The Center for Synchrotron Radiation Research and Instrumentation at Illinois Tech promotes the collaborative development and application of synchrotron radiation techniques to the study of nuclear materials.)

• UC Berkeley facility creates new research capabilities, by Peter Hosemann, p. 65

(Capabilities have been added at UCB's Nuclear Materials Laboratory, providing more opportunities for researchers in the Nuclear Science User Facilities community.)

March

Breathing new life into a former research reactor building, by Colin Barras, p. 31

(With the refurbishment of the University of Michigan's Ford Nuclear Reactor Building, the current generation of nuclear engineering students, along with their faculty, has some state-of-the-art laboratories in which to research, study, and learn.)

SPECIAL SECTION: 20th Annual Reference Issue, pp. 39–71

(Annual compendium of nuclear power plants under construction, in operation, or retired from service worldwide)

• Notes on the 2018 World List of Nuclear Power Plants, p. 40

• World List of Nuclear Power Plants, p. 41

• Abbreviations Used in the World List, p. 60

• Power Reactors by Nation; Power Reactors by Type, Worldwide, p. 61

• Nuclear Power Plants No Longer in Service, p. 62

• Maps of Commercial Nuclear Power Plants Worldwide, p. 64

• U.S. Power Reactor License Renewal, p. 70

• New Power Reactor Projects in the United States; U.S. Power Reactor Ownership/Operator Changes, p. 71

April

Working together to enhance nuclear reactor safety, by Damian Peko, Sudhamay Basu, Steven Kraft, Shinya Mizokami, and Joy Rempe, p. 36

(Information from examinations at the affected reactors at Fukushima Daiichi is being used to enhance reactor safety in U.S. operating plants, plants under construction, and future nuclear power plants.)

DOE and NRC fiscal year 2019 budget requests, p. 26

(As with FY 2018, the fate of this latest budget request is uncertain, as President Trump once again makes cuts to popular programs while expanding spending in others.)

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May

SPECIAL SECTION: Decommissioning, pp. 37–48

- Waste Management Conference: Advanced technologies, by Tim Gregoire, p. 38

(The potential of robotics and remote systems to improve the safety and efficiency of nuclear decommissioning and remediation was the focus of this year's Waste Management Conference.)

- A product line approach to nuclear plant decommissioning, by Russ Valin, p. 44

(Establishing a product line approach for nuclear power plant decommissioning involves applying lessons learned, developing long-term solutions, standardizing tools, and implementing comprehensive training programs.)

June

SPECIAL SECTION: Health Physics and Isotopes & Radiation, pp. 31–47

- Meeting the moly-99 challenge, by Tim Gregoire, p. 32

(In the race to create a stable supply of the important medical radioisotope molybdenum-99, several private companies are leading the way.)

- Bridging the LNT and hormesis radiation protection models, by Mehdi Sohrabi, p. 37

(Proposed: A universal radiation protection system for the global standardization of radiation protection of workers, the public, and the environment in the 21st century.)

- Lights in the desert: Anniversaries and celebrations, by Wanda Munn and Anna Markham, p. 43

(The three-location Manhattan Project National Historical Park allows the public to connect personally with the stories and artifacts of the Manhattan Project's important World War II mission.)

July

John Kelly: From Motor City to the Capital City, by Tim Gregoire, p. 46

(Having specialized in nuclear safety, the 64th president of the American Nuclear Society has long advocated for advancing the country's nuclear technologies.)

SPECIAL SECTION: Operations, pp. 29–37

- Changing times for equipment qualification, by Lou Jesso, p. 30

(Equipment qualification is intended to ensure that design- and age-related common cause failures will not prevent safety-related equipment from performing its required functions, and that such equipment will operate on demand under normal, abnormal, and design-basis event conditions.)

- Enhancing equipment reliability, interview by Michael McQueen, p. 35

(A team from Exelon Corporation won this year's Best-of-the-Best TIP Award for a program to inspect and test spare parts prior to installation at the plants.)

August

SPECIAL SECTION: Twenty-Fourth Annual Vendor/Contractor Profile Special Section, pp. 44–106

(Advertorial information about products and services provided by companies in the nuclear industry)

Nichita: On *Problems in Elementary Reactor Physics, with Solutions*, interview by Rick Michal, p. 25

(This book is a collection of problems intended primarily for undergraduate students studying reactor physics and for those interested in reviewing fundamental reactor physics concepts.)

Ann Winters: On the 100th anniversary of Wilkinson's birth, interview by Rick Michal, p. 32

(The author of a recent biography of Vice Admiral Dennis Wilkinson, the first commanding officer of the first nuclear-powered submarine, shares her recollections of him over their 33-year friendship.)

SPECIAL REPORT: 2018 ANS Annual Meeting, pp. 107–116

- Toward the future, by Tim Gregoire and Michael McQueen, p. 107

(A report on the 2018 ANS Annual Meeting, held June 17–21 in Philadelphia, Pa.)

- Topical Meeting: Advances in nuclear fuels and structural materials, by Tim Gregoire, p. 114

(Meeting the needs of the next generation of nuclear reactors was the focus of the NFSM topical meeting.)

September

SPECIAL SECTION: Nonproliferation, pp. 29–35

- MOSAIC: Updating the IAEA's Safeguards IT system, by Dick Kovan, p. 30

(With a modernized information technology system in place, the IAEA Department of Safeguards has a suite of tools with which to face the nuclear security threats of tomorrow.)

- 810 shades of gray, by Art Wharton, p. 33
- (You may have heard of 10CFR Part 810, but it's not everything.)

October

SPECIAL SECTION: Outage Management and Plant Maintenance, pp. 43–67

- Davis-Besse's 20th outage: The "Drive For 25," by Mark Kanz, p. 44

(As a result of detailed planning, improved communications, and a united effort, Davis-Besse and its contractors achieved their 25-day outage goal—a plant record.)

- Utility Working Conference: Trends in maintenance and work management, by Michael McQueen, p. 58

(The 25th ANS Utility Working Conference focused on improving industry performance and managing operation risk.)

November

A diamond in Dogpatch: The 75th anniversary of the Graphite Reactor—Part 1, by Sherrell R. Greene, p. 38

(The Graphite Reactor and its companion plutonium separations facility in Oak Ridge played an extraordinary role in the success of the Manhattan Project's atomic bomb design and production effort.)

Quoting at Random: Ostendorff: Nuclear energy and national security, p. 14

(William C. Ostendorff, a former member of the Nuclear Regulatory Commission and Distinguished Visiting Professor of National Security at the U.S. Naval Academy, delivered remarks during the Center for Strategic and International Studies symposium, Nuclear Energy, Naval Propulsion, and National Security, held on October 2 in Washington, D.C.)

December

SPECIAL SECTION: Fuel, pp. 43–58

- TREAT: A look at its past, present, and future, by Hank Hogan, p. 44

(After nearly a quarter-century in standby mode, the Transient Reactor Test Facility at Idaho National Laboratory is once again conducting experiments.)

- Industry-driven: A brief history of nuclear fuel innovation, by Donna Ruff, p. 50

(Innovation, driven by societal needs, has powered the commercial nuclear industry and its long history of technological advances, including nuclear fuel.)

- ATF: Accelerated innovation through collaboration, by Susan Gallier, p. 56

(During the ANS Winter Meeting, a panel session focused on the development and deployment of accident-tolerant fuel.)

A diamond in Dogpatch: The 75th anniversary of the Graphite Reactor—Part 2, by Sherrell R. Greene, p. 28

(Following World War II, the Graphite Reactor was the foundation upon which Oak Ridge National Laboratory was built, and it gave birth to many of the technologies we take for granted in the 21st century.)

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Mayo: *Introduction to Nuclear Concepts for Engineers*, 20 years on, interview by Rick Michal, p. 32

(The author of a well-regarded textbook talks about the subject matter that keeps the book relevant.)

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