

THIS ISSUE

A little more than one year after the Fukushima tragedy, this issue of *Elements* provides a summary of the nuclear accident as it has been reconstructed and the lessons that other facilities can take from it, and it gives an overview of the resulting contamination in the air, soils, and ocean. The Perspectives section provides six different points of view on the future of nuclear power in the aftermath of Fukushima. And Travelogue offers an account of a scientist's visit to the evacuation zone. These articles reveal that behind the human tragedy, a large number of scientists are working hard to provide the data necessary to understand the accident and find solutions.

Kudos to guest editors Takashi Murakami and Rod Ewing who accepted the challenge of assembling this issue of *Elements* under a much accelerated schedule: the first invitations to authors were sent out at the end of August 2011. Our gratitude also goes to the authors, who accepted the challenge of writing review articles while so much data are still being amassed—like trying to hit a moving target.

At Goldschmidt 2010, I was impressed by the argument Tennessee Senator Lamar Alexander made in favor of nuclear power as the energy of the future. In his keynote presentation, he reviewed all the energy sources in terms of the land used to produce the energy. For example, the land occupied by one nuclear plant producing enough power for 90,000 homes is one square mile. To produce the same amount of energy, solar power requires 15 square miles, petroleum 18. But the Fukushima Daiichi nuclear power plant accident reminds us that when something goes wrong in this industry, a huge territory can be impacted and the economic costs of bringing an accident under control are staggering. This does not include the suffering of people who have been displaced from their homes and face an uncertain future. About 90,000 persons who lived in the evacuation zone near the plant have not been able to return to their homes. We dedicate this issue to them, and also to the 20,000 persons who died in the aftermath of the earthquake and tsunami.

Earth scientists are providing the scientific basis for addressing critical questions, such as when it will be safe to return to the contaminated areas. This requires multidisciplinary teams that need to avoid being made irrelevant by answering, "We need to do more work." Answers are needed now and have to be clearly communicated to decision makers.

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societal aspects are interlinked in nuclear activities, due to a general attitude of fear towards nuclear power. Better relations between technology and society rely on improved and deepened scientific knowledge and on complete disclosure of the available data. The Fukushima disaster illustrated public suspicion towards the various authorities and company representatives, and even towards the technological and scientific information provided by the organizations and institutions working on the site. Scientists must regain public confidence by clearly communicating in-depth and rigorous studies of the impacts of radioactivity on the various environments and ecosystems. An optimistic vision is that by improving the information available to the public, we will reinforce the need for our authorities to explain the scientific grounds for their political decisions, helping balanced choices to be made.

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UPCOMING EDITOR

We are delighted that Patricia (Trish) Dove of Virginia Tech has accepted our invitation to join the editorial team. She will replace Tim Drever, whose term ends in December 2012. We will formally introduce Trish in the first issue of 2013.

ABOUT DUPLICATE COPIES – PART 2

From time to time, we receive inquiries regarding the management of subscriptions, such as these: "I joined society X and am also member of society Y but I am still receiving only one copy of *Elements*. I would like this second copy to be shipped to a colleague in Estonia!" "I would be happy to only have online access to *Elements* and save you the mailing costs." "My husband and I both receive *Elements*. We only need one copy; please eliminate mine."

As explained in the April issue (8: 84), *Elements'* financial model requires that we eliminate duplicate mailings. This reduces printing and mailing costs, and these savings are passed on to the participating societies in the form of lower subscription rates. So even if you belong to more than one society, you should only receive one copy of *Elements*. We ask our readers to encourage colleagues who are interested in receiving *Elements* to join one of the participating societies.

Although granting requests like online access only might seem like a good idea, it could end up being expensive, as managing these requests would be very time consuming and might necessitate the hiring of a subscription manager, thus erasing any saving and probably increasing costs, which would then have to be passed on to the societies. Put your unneeded paper copy of *Elements* to good use: depending on the topic, send it to your dean, give it to a student, a colleague, or a neighbor.

Pierrette Tremblay, Managing Editor

Elements makes a splash in *Natural History*

With its timely and societally relevant topics, *Elements* has effectively permeated the mineralogy, geochemistry, and petrology community and has even reached other interested scientists and administrators. When geoscientists have the chance to reach out to the general public, it is important that they make the effort to do so. Such an opportunity occurred recently when the editor-in-chief of *Natural History* magazine, Vittorio Maestro, contacted Barb Dutrow and Darrell Henry, guest editors of the October 2011 *Elements* issue on tourmaline, about writing an article for his magazine. Associated with the American Museum of Natural History, *Natural History's* mission is to promote public understanding and appreciation of nature and science. Maestro had read the Tourmaline issue and felt it would draw the interest of his readers. Not since a 2004 article on zircon had *Natural History* focused an article exclusively on a mineral. Working with Vittorio Maestro, Barb and Darrell reconfigured and condensed the six papers from the *Elements* issue into a single article that is visually exciting, scientifically correct, and accessible to the curious public. The article entitled "The Tourmaline Diaries: An Eye-Catching Mineral and Its Many Facets" appeared in the March 2012 issue of *Natural History*. *Natural History* has a circulation of about 50,000, with 1900 libraries and an audience of nearly 200,000.

Barb Dutrow, Louisiana State University

