

## ABOUT THIS ISSUE

Stargazing is a wonderful pastime. Whether you catch a glimpse of the stars while doing field research or you enjoy an evening with your kids in the backyard counting “shooting stars”, stargazing reminds us just how amazing the universe is when the magnificence of the heavens is unfurled before our eyes. And, we don’t have to be experts to appreciate it. August 2017 saw North Americans in a state of frantic frenzy to buy eclipse viewing glasses and find the best location to observe the first total solar eclipse in the US in almost 40 years. Most of the eclipse stargazers weren’t scientific experts but they clearly understood the uniqueness of this event. Whether an expert or not, there are a plethora of amazing smart phone apps readily available to the inquisitive



This Leonid meteor is part of the debris from comet 55P/Tempel-Tuttle. It flared into view 19 November 2017, producing a green wake and lighting up the clouds. The light from the burning meteor interacted with the tiny water droplets in the clouds to create this spectacular iridescent glow, all against the backdrop of the Big Dipper (Ursa Major) constellation. PHOTO BY P. JENNISKENS FROM VIDEO TAKEN BY KLAAS JOBSE, OOSTKAPELLE.

stargazer such as “SkyView”, “SkySafari”, “Night Sky”, or “GoSkyWatch Planetarium”. With these apps, just hold your phone towards the night sky to quickly learn about everything that shines up there!

Do you recall the last time you saw a comet garnishing the skies above you? Most of us are amateur stargazers who are equipped, at best, with one or two tools: our eyes and a pair of binoculars. With these limited tools, for a comet to be noticeable it would need to be bright, have a long tail, and reside in the sky long enough to be noticed. Smaller, dimmer comets can sometimes be seen but amateurs will likely need the advice of an expert to tell them where to look. There are, however, some comets that one doesn’t require a PhD or special tools to appreciate: these are the Great Comets. These comets are remarkable and can readily be seen by the casual observer, even during the day! Historical records over the past 6,000 years have noted that such comets have often visited Earth’s neighborhood. Within the past 10 years, Southern Hemisphere stargazers have had their skies embellished by two Great Comets: McNaught in 2007 and Lovejoy in 2011. The Great Comets are not common but when they do arrive, we notice. One familiar repeat visitor is Halley’s comet. This comet last swung by our neighborhood in 1986. If you missed its visit then, it is projected to be back in 2061. While you wait for its return, take the time to learn more about these amazing “dirty snowballs” from the articles in this issue of *Elements*.

## BREAKING NEWS: JOHN EILER JOINS *ELEMENTS* EDITORIAL TEAM



John Eiler.  
CREDIT: CALTECH

We are excited to announce that John M. Eiler, Robert P. Sharp Professor of Geology and Geochemistry at the California Institute of Technology (USA) has agreed to join the *Elements* editorial team as our next geochemistry editor. His official term begins January 2019. He will replace Friedhelm von Blanckenburg whose term of office ends December 2018. We will introduce John more formally at a later date.

## *ELEMENTS* AT RFG2018, GOLDSCHMIDT2018, AND IMA2018

*Elements* is an international magazine of mineralogy, geochemistry, and petrology, and it is published through the collaboration of 17 participating societies and 3 affiliated organizations. The purpose of *Elements* is four-fold:

- to promote and advance the three disciplines of mineralogy, geochemistry and petrology;
- to increase the visibility of these three disciplines and to specifically emphasize the impact and importance of these disciplines to the broader scientific community and society;
- to provide a publication medium for the integration of these three disciplines;
- to publicize the activities and publications of the participating societies and affiliated organizations.

To fulfill this purpose, *Elements* is published bimonthly, with six magazines a year that are shipped to 16,000+ readers and are available (online and/or print) in 1,800+ libraries and institutions worldwide. In addition to reaching the scientific community through the printed page, *Elements* also hosts exhibition booths at trade conferences to further increase the visibility of our science. In 2018, *Elements* will have an exhibition booth at each of three major international conferences that are sponsored by several of our participating and affiliated societies. The three conferences are:

- The Resources for Future Generations 2018 (RFG2018) conference (June 16–21), to be held in Vancouver (Canada). This meeting is expected to have in attendance over 3,000 geoscientists, policy-makers, and other stakeholders. The RFG2018 conference is being coordinated by

the Mineralogical Association of Canada (MAC) in conjunction with several other organizations. You can read more about this meeting in the MAC society news on page 120 of this issue. Visit <http://www.rfg2018.org> for more information.

- The Goldschmidt2018 conference (August 12–17), to be held in Boston (USA). This conference is expected to have in attendance ~4,000 geochemists. Goldschmidt2018 is being organized by the Geochemical Society and the European Association of Geochemistry. Visit <https://goldschmidt.info/2018/> for more information.
- The XXII Meeting of the International Mineralogical Association (August 13–17), to be held in Melbourne (Australia). This meeting is expected to have ~1,000 mineralogists in attendance. It is being co-sponsored by the Mineralogical Society of Great Britain and Ireland. Visit <https://www.ima2018.com/> for more information.

If you are attending any of these meetings, please stop by our booth to meet our editorial staff, thumb through current and past issues of *Elements*, purchase back issues at a discounted rate, discuss ideas for future issues, and learn about advertising opportunities in our magazine. We look forward to meeting you!

## PROPOSE A TOPIC FOR *ELEMENTS*

On 2 March 2018, the editorial team met via conference call to consider thematic proposals for possible inclusion in future issues of *Elements*. We thank all the organizers who submitted a proposal. We had ten high-quality proposals to evaluate and chose three that will comprise the thematic content for our October 2019, December 2019, and February 2020 issues. It is always a difficult decision to select only three proposals because there are so many wonderful topics to cover! The *Elements* lineup for 2019 is, however, now set, and we look forward to bringing the following topics to you: planet Mercury; reactive transport modeling; the South Aegean volcanic arc; weathering; catastrophic perturbations to Earth’s carbon cycle; and kimberlites.

Obviously, there are so many more topics to feature in *Elements*. Thus, on 12 August 2018, the editorial team will once again meet to evaluate thematic proposals for our 2020 lineup. Please submit a thematic proposal for our consideration! For more information on how to submit a proposal, please go to <http://elementsmagazine.org/publish-in-elements/>

**Friedhelm von Blanckenburg,  
Nancy Ross, Jonathan Blundy, and Jodi Rosso**