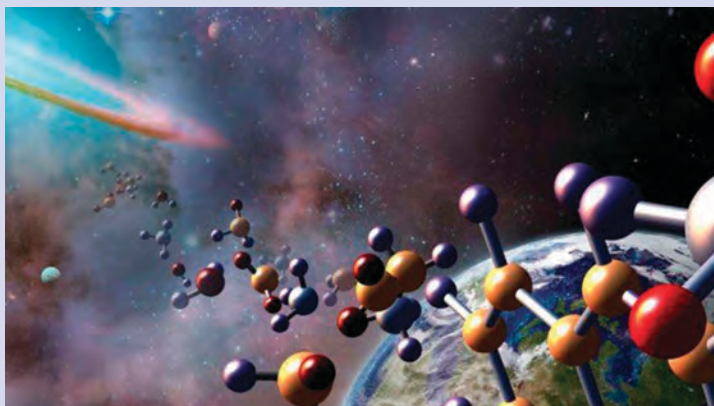


ABOUT THIS ISSUE



How did life arise from inorganic molecules? Did it develop in an early Earth primordial soup or was there an extraterrestrial source? Although the answer to the origin of sentient life has yet to be discovered by scientists, the origins of the genetic blueprints for life (e.g. RNA), the workhorses of life (e.g. proteins), and the protective membranes for life (e.g. lipids) are rapidly being uncovered. But, making the basic building blocks is only the first step. The next steps involve converting those molecules into viable cells. Believe it or not, geoscientists are needed to help uncover the answers to these questions because abiogenesis requires chemical, biological, and geological considerations. We hope the articles in this issue help introduce you to this exciting field of research.

2017 PREVIEW AND FUTURE ISSUES

Our lineup is complete through 2017 (see our preview for 2017 on pages 382 and 383), but there is so much more to cover. If you have ideas for a thematic issue, contact one of our principal editors and submit a proposal for our consideration at our mid-April 2017 editorial meeting. At that time, we will be setting our lineup for the first half of 2019. More information about publishing in *Elements* can be found at elementsmagazine.org/publish-in-elements/.

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life? Possibly. You will see connections as you read this issue. The early Earth? Likely. For example, we may finally resolve enigmas of the Proterozoic—that somewhat unusual interval of Earth history characterized by massive deposits of carbonate, sulfate, and iron sediments having textures and compositions that are rarely, if ever, found again in the geological record. And the modern Earth? Definitely. A mechanistic picture of particle-based processes will improve our ability to interpret and manage urgent environmental challenges.

The coming decade promises to be ever more exciting as scientific discovery marches forward. I wish you godspeed in being part of all that lies ahead.

Patricia M. Dove, Principal Editor

Burton WK, Cabrera N, Frank FC (1951) The growth of crystals and the equilibrium structure of their surfaces. *Philosophical Transactions of the Royal Society of London Series A* 243: 299-358

Ivanov VK, Fedorov PP, Baranchikov AY, Osiko VV (2014) Oriented attachment of particles: 100 years of investigations of non-classical crystal growth. *Russian Chemical Reviews*, 83: 1204-1222.



In our final issue of 2016, we like to take a moment to extend our appreciation to the guest editors and authors who contributed to the six issues of volume 12. These men and women succeeded at writing compelling articles for *Elements'* scientifically diverse audience and in adhering to the journal's deadlines and guidelines. We also thank our feature editors (Ian Parsons, Penelope King, Michael Wiedenbeck, Cari Corrigan, David Vaughan, and Andrea Koziol) who volunteer their valuable time to produce the Parting Shots, A Life in Science, The *Elements* Toolkit, *CosmoElements*, Mineralogy Matters, the Calendar, and People in the News. We also acknowledge the reviewers, our copy-editor Patrick Roycroft, and our graphic artist, who diligently work in the background to bring *Elements* to life.

In addition, we thank our advertisers for their continued support. In the day and age of digital media, these advertisers have invested in a print publication to reach you! Please take the time to speak with their representatives about their products and services. Those that advertised in 2016 were Analab, Australian Scientific Instruments, Cambridge University Press, CAMECA, Crystal Maker, Elemental Scientific, Excalibur Minerals Corporation, Geological Society of London, Gemological Institute of America (GIA), The Geochemist's Workbench, International Center for Diffraction Data, International Kimberlite Conference, International Mineralogical Association, IsotopX, National Electrostatics Corporation, Overburden Drilling Management, PanAnalytical, *Periodico Mineralogia*, ProtoXRD, Rigaku, Savillex, Selfrac, Society for Geology Applied to Mineral Deposits, TofWerk, and Wiley. Special mention goes to **Australian Scientific Instruments, CAMECA, Excalibur Minerals Corporation, The Geochemist's Workbench, Periodico Mineralogia, ProtoXRD, Savillex, and Selfrac** who advertised in each issue during 2016.

We also want to thank the 17 participating societies who faithfully support this magazine. Without them, *Elements* wouldn't exist.

THANKS TRISH!



With this issue, Trish Dove retires as a principal editor of *Elements*. During her tenure, she was in charge of the following issues: The Mineral-Water Interface (v9n3), Unconventional Hydrocarbons (v10n4), Cosmogenic Nuclides (v10n5), Apatite: A Mineral for All Seasons (v11n3), Geomicrobiology and Microbial Geochemistry (v11n6), and Origins of Life: The Transition from Geochemistry to Biogeochemistry (v12n6). Trish has been a vital part of our editorial team since 2013. Not only did we value her editorial handling of articles, her expertise and experience were invaluable assets during the Executive Editor transition in 2015. Thank you, Trish, for all you have done to help *Elements* continue to be the most readable and authoritative magazine in mineralogy, petrology, and geochemistry.

Best wishes to everyone for the coming year.

Gordon Brown Jr., Bernard Wood, Friedhelm von Blanckenburg, and Jodi Rosso