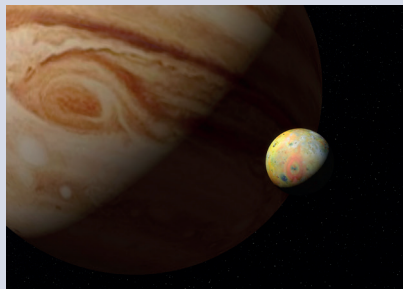


**ABOUT THIS ISSUE**

Io is the best place to understand a fundamental process that shaped terrestrial planets, icy ocean worlds, and extrasolar planets: tidal heating. Caught in orbital resonance with other Jupiter moons (Europa and Ganymede), Io is the most tidally heated world and may contain the only extant magma ocean in our Solar System. The spectacular volcanic plumes sustain the atmosphere and feed the magnetosphere of the Jovian system. The hot lavas on its surface reflect heat-pipe tectonics, which is analogous to the volcanically hyperactive youth of all rocky planets. Io is the ideal planet-scale laboratory to study the intertwined processes of tidal forcing, extreme



volcanism, and atmosphere-magnetosphere interactions. Investigating Io is necessary to understand ocean worlds, tidally-heated exoplanets, and the early terrestrial planets, including how they evolve chemically.

This issue of *Elements* reviews our knowledge of Io, including discoveries from telescopic observations, past missions, as well as perspectives for future missions. Six chapters cover interior dynamics and surface processes, with insights from field and laboratory studies in volcanology, petrology, geochemistry, and geophysics.

Greetings, *Elements* readers!

We were surprised to recently learn that our tried-and-true publisher, Allen Press based in Kansas (USA), was purchased by CJK Group, Inc., integrated into their company, Sheridan, and renamed Sheridan Kansas. Sheridan manages 10 print presses based in the USA and works in tandem with CJK Group Inc.'s publishing solutions company, KnowledgeWorks Global Ltd. (KGL).



While this came as a big surprise to us at *Elements*, the transition has so far been relatively seamless. There have been no changes in our submission/print protocol, and the primary staff contacts remain the same. In fact, when a recent print delay arose at Sheridan Kansas owing to unexpected maintenance required on their M600 offset press, their support team was able to rapidly transfer our issue to one of their "sister presses" for production.

While some aspects of the modern world will inevitably change, our commitment to excellence with the scientific journalism presented in *Elements* remains steadfast. Each issue is carefully put together by a

range of expert scientists, society leaders, several tiers of editors, and a graphics team for your reading pleasure. We are hopeful that the transition of Allen Press to Sheridan Kansas under the leadership at Sheridan and KGL will have a positive outcome for *Elements*. We thank you all for your patience and support as we navigate the changing times.

**Richard Harrison, Becky Lange, Janne Blichert-Toft, and Esther Posner**

*"What a timely issue given the earthquake along the southern part of the Cascadia Subduction Zone on December 20. Received my copy of Elements the same day."*

Hon. Marian Kromkowski (Michigan, USA)



**EDITOR'S CORRIGENDUM – TYPO TURNED TERM?**

The *Elements* Editorial Team regrets to report that a typo was accidentally introduced on the cover of vol. 18, no. 5, *Cement and Concrete: From the Romans to Mars*, that was unfortunately not caught in time before the issue was printed. While the online magazine has been corrected, the print copy includes the erroneous spelling of the word "Materials" as "Naterials." We considered doing a full reprint with the correct cover, but the environmental costs of throwing away so much material are not aligned with our values, nor are the required finances available in our annual budget. We sincerely apologize for this unintended oversight. An improved back-up system has been put in place to avoid such errors in the future.

Not to make light of the situation, but throughout this nightmarish ordeal, we have actually grown somewhat fond of "naterials," perhaps as a shortened form of "natural materials." Typo turned term? We gladly offer you the opportunity to use this new term in your personal and professional life, despite the unfortunate circumstances of its creation.

**Each issue of *Elements* is carefully crafted to appeal to scientists, students, and members of society. Now accepting thematic proposals for our 2025 line-up. [elementsmagazine.org](http://elementsmagazine.org)**