

THIS ISSUE

This issue illustrates admirably how materials known and used since the dawn of humanity may still have many surprises in store for us in terms of new uses and applications. Guest Editors Paul Schroeder and David Bish chose to present the whole spectrum of uses of kaolin, from ancient porcelains to nanocomposites.

In her article about mining kaolin, Jessica Elzea Kogel provides an excellent snapshot of mining today, and I encourage all to read it. She stresses the importance of mining responsibly, with a plan for returning the land to a postmining use that will have value to the local community. Gaining acceptance by the local community (“social license”) by involving all stakeholders is just as important as drilling to delimit the ore resources.

Why does mining get such bad press then? In a recent issue of *Canadian Geographic*, the possibility of mineral exploration, let alone exploitation, in an isolated area of Jordan was seen as a catastrophe. This is a paradox, because we consume greater and greater amounts of resources per capita. These resources need to be dug up from the ground somewhere—as long as it is not in our own back yard. Sadly none of the mining companies approached by the guest editors chose to advertise in this issue to let us know how they have embraced the challenge of gaining acceptance from local communities. And perhaps this is part of the mining industry’s problem.

I am very fond of this issue’s Parting Shot. The idea germinated at the last GSA meeting in Denver. Over a glass of wine, Rod Ewing was telling a few of us how he enjoyed reading Ian Parsons’ Parting Shots. “He could write about a brick and make it interesting,” said Rod. Ian rose to the challenge—read his Parting Shot about the Friendly Brick (by the way, the lovely little girl in the picture is my granddaughter, Ellie Rose). And kaolin was the perfect issue in which to publish this Parting Shot.

TRANSITION

I am thrilled that Jodi Rosso has been chosen to succeed me at the end of this year (see accompanying text). I did not know Jodi personally but thought she had the perfect profile for the job. So I was delighted that after an international search, the search committee came to the same conclusion. For the last month Jodi and I have conversed during weekly Skype calls, and it has been inspiring to share ideas and make plans. At the Goldschmidt Conference in Sacramento, we intend to map out the next few months to ensure that the transition is complete by the end of the year.

EDITORIAL *Cont’d from page 163*

kaolin-group minerals, the development of environmentally sensitive modern mining practices, and the many uses of kaolin-group minerals in modern technology and medicine. After reading these articles, it should be clear that kaolin-group minerals had a major impact on early humans and that they continue to impact modern humans through their many and varied uses.

Gordon E. Brown Jr.

Principal Editor in charge of this issue

REFERENCES

- Chen P-Y, Lin M-L, Zheng Z (1997) On the origin of the name kaolin and the kaolin deposits of the Kauling and Dazhou areas, Kiangsi, China. *Applied Clay Science* 12: 1-25
- Hurlbut CS Jr (1970) *Minerals and Man*. Random House, Inc., New York, 304 pp
- Laufer B (1930) *Geophagy*. Field Museum of Natural History, Chicago, Publication 280, Anthropological Series, volume XVIII, no. 2, 198 pp
- Young SL (2011) *Craving Earth*. Columbia University Press, New York, 228 pp
- Wu X and 6 coauthors (2012) Early pottery at 20,000 years ago in Xianrendong Cave, China. *Science* 336: 1696-1700

FROM A READER

“Thought you might like this... Served up while on a KLM flight, and I really was reading the latest issue!! Not that I would recommend the wine especially.”— John Ludden



FREE TO STUDENTS

Students take note: In this issue, two of our regular advertisers are offering for the first time free student editions of their software.

The Geochemist Workbench student edition is offered to students currently registered as full-time undergraduates or graduates at an accredited university offering degrees in geoscience. Students can apply on the website <http://student.gwb.com>.

As part of its 20th-birthday celebrations, CrystalMaker has launched a free “CrystalViewer” program. This is designed for use by individual students, to empower and inspire them to explore our microscopic world. CrystalViewer includes a library of over 120 structures, including a range of minerals, advanced materials (many derived from mineral prototypes), plus a teaching library of crystal chemical compounds.

Pierrette Tremblay, Executive Editor

DR. JODI ROSSO APPOINTED NEW EXECUTIVE EDITOR OF *ELEMENTS* STARTING JANUARY 1, 2015



After an extensive international search over the past year and with 35 applicants from 10 countries, Jodi Rosso was selected as the next Executive Editor for *Elements*. She will replace current Executive Editor Pierrette Tremblay, who will step down at the end of 2014 after 10 years.

Jodi brings her extensive and diverse experience in mineralogy, petrology, and geochemistry (MPG) to *Elements*. She received her PhD from Stanford University (USA) with an emphasis in geochemistry. Since 2000, she has been the series editor of *Reviews in Mineralogy and Geochemistry*, a joint publication of the Mineralogical Society of America (MSA) and the Geochemical Society, overseeing the publication of 29 volumes on a wide range of MPG subjects. She also serves as editor of the *Monographs* series, published by MSA.

Jodi is a devoted reader of *Elements* and, being particularly fond of Parting Shots, she likes to start reading each issue from its last page. Her considerable publication experience with RIMG volumes, her research training in MGP, and her enthusiasm and creativity were compelling qualities for her being selected for the position.

She and the retiring executive editor will work closely over the next several months to ensure a smooth transition of leadership at the magazine. Please welcome Jodi Rosso to the *Elements* family.

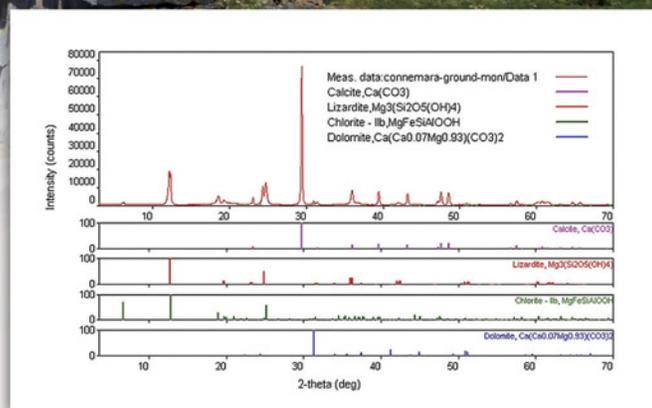
Executive Editor Search Committee (appointed by *Elements'* Executive Committee): Barb Dutrow, chair; Liane G. Benning, Bernardo Cesare, Rod Ewing, John Valley, J. Alex Speer (ex officio)

Phase identification and Rietveld refinement of Connemara marble with a benchtop X-ray diffractometer



Connemara marble is unique in the sense that it is only found in one place on earth – in Galway County on the scenic west coast of Ireland.

In addition to containing a limestone mineral (calcite), three other phases belonging to the serpentine mineral family are found in Connemara Marble. The main polymorphic forms are chrysotile, antigorite, and lizardite. X-ray diffraction is a viable technique to identify and pinpoint the exact phase of the serpentine family.



Mineral	Chemical Formula	Wt %
Lizardite	Mg ₃ (Si ₂ O ₅ (OH) ₄)	38.2
Calcite	CaCO ₃	44.5
Chlorite Ilb	MgFeSiAlOOH	15.1
Dolomite	CaMg(CO ₃) ₂	2.2

Specimens of Connemara marble were pulverized and analyzed with the Rigaku MiniFlex benchtop XRD. A Rietveld analysis was performed using the model obtained from these phases.



Rigaku Corporation and its Global Subsidiaries
website: www.Rigaku.com | email: info@Rigaku.com