# Mineralogical Society of Great Britain and Ireland

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## NEWS FROM THE MINSOC

For the next several issues of *Elements*, we will shine a spotlight on the special interest groups (SIGs) of the Mineralogical Society of Great Britain and Ireland (MinSoc). Those active in the SIGs will realise their value, scientifically at meetings, in terms of networking opportunities, and their contributions to MinSoc publications. First up is one of the oldest of the SIGs, the Applied Mineralogy Group.

The Applied Mineralogy Group (AMG) was founded in 1963 by Norman F.M. Henry. It consists of a group of established, early career and student researchers dedicated to promoting study and research in mineralogy as applied to ores and related industrial minerals. This encompasses ore microscopy, fluid inclusions, nuclear minerals, coals, refractories, slags, ceramics, building materials, nuclear waste disposal, carbon capture and storage, down-hole borehole alteration, and mineral-related health hazards.

The AMG achieves this through supporting students with travel bursaries, and occasionally offering awards for students at conferences (e.g. Goldschmidt 2017). We also support open access (OA) publication: see the recent special issue of *Mineralogical Magazine* 'Critical Metal Mineralogy and Ore Genesis,' at https://www.cambridge.org/core/journals/mineralogical-magazine/issue/750A8F36E852578C90E95CAC1D8C4B4E, and the release of the quarterly bulletin *Applied Mineralogist*, distributed by the Mineralogical Society. Please contact the AMG secretary, Eimear Deady (eimear@bgs.ac.uk) if you would like to be added to the mailing list of this very enjoyable publication. Copies of back issues can be found at https://www.minersoc.org/amg-applied-mineralogist.html.

The AMG supports many scientific meetings each year. Recent meetings in which AMG was involved include the Mineral Deposits Study Group (Brighton, UK, January 2018), the William Smith meeting of the Geological Society (July 2018) and the Extractive Industries Group 2018 meeting (Durham, UK, September 2018). The AMG is also involved with the proposed 'Critical Metals' meeting in Edinburgh (UK) for April 2019 (more details to follow).

For your enjoyment, here is an 'applied mineralogy' crossword to help fill your next coffee break! Please send completed entries, including the solution to the anagram shown in green at the end, to the Mineralogical Society office (c/o admin@minersoc.org). The winner will receive a prize of their choice of a Society-published book. The deadline for receipt of completed entries is 30 August 2018.

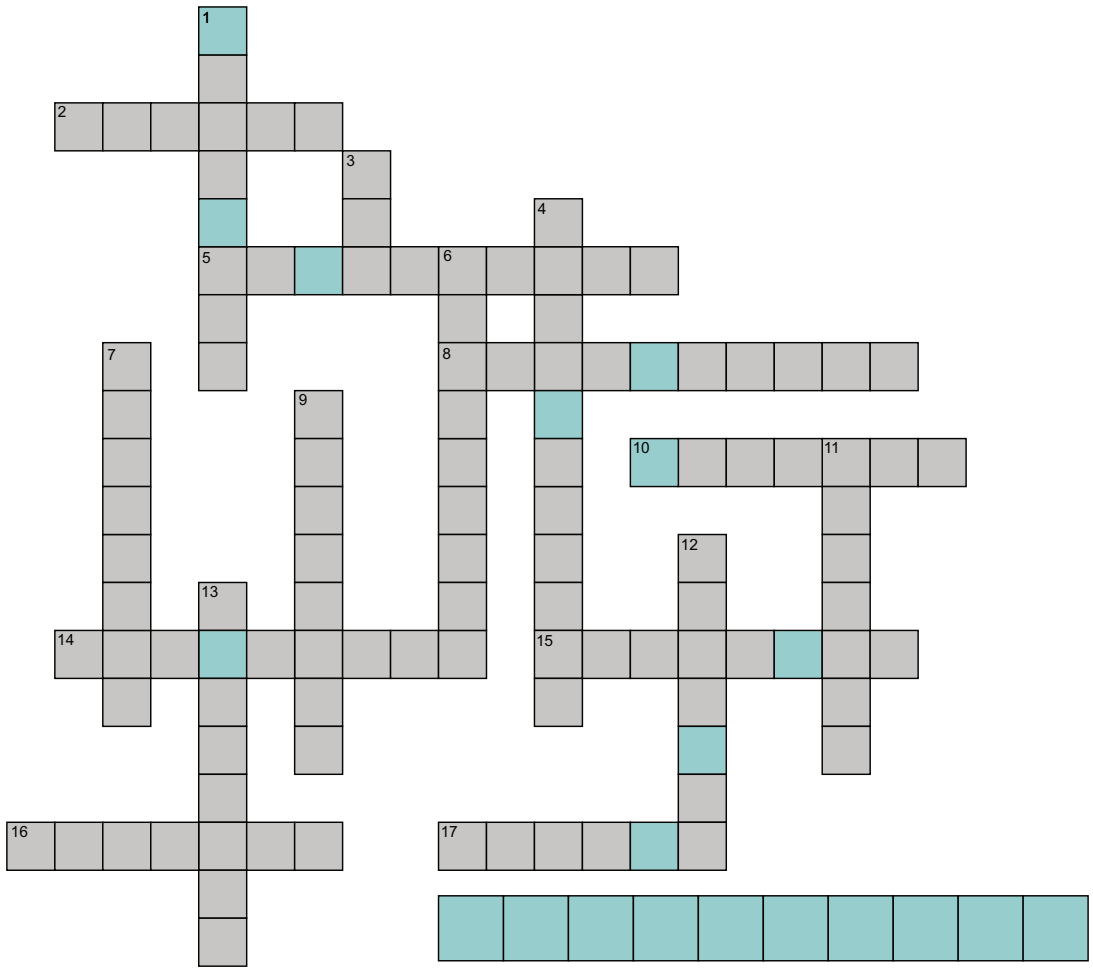
## APPLIED MINERALOGY CROSSWORD

**Down**

1) Which reef links North West, Limpopo, Gauteng, and Mpumalanga? (8)
3) X-ray characterising abbreviation. (3)
4) All those crystal faces... (6,5)
6) Green monoclinic inosilicate, $ABSi_2O_6$ (unripe grape). (9)
7) That laser left a mark... (8)
9) A reclusive REE-phosphate. (8)
11) Same element but different. (7)
12) Living leaching agent. (7)
13) Superman's weakness (minus fluorine). (8)

**Across**

2) What can be vuggy, comb, colloform, or saccharoidal? (6)
5) Polymorph of 2. (10)
8) Book of minerals, magnesium end-member. (10)
10) 39 similar to 57-71. (7)
14) What follows: Rhyolite, Andesite, Basalt, ... (9)
15) Well that's negative... (8)
16) New mining prospect in the SW. (7)
17) Mn on the floor? (6)



## COLLINS MEDAL FOR 2018

Professor David Craw

The first of our three medal awards for 2018 took place in April. President-elect, Bruce Yardley, presented the Collins Medal to Prof. Dave Craw.

**Citation Speech (Bruce Yardley):** The Collins Medal of the Mineralogical Society of Great Britain and Ireland is awarded annually to an eminent mineralogist (in the broadest sense) who has made an outstanding lifetime contribution to pure or applied aspects of mineral science. This year's Collins Medal is awarded to Professor David Craw of the Department of Geology, University of Otago (New Zealand). I am very grateful to the President for delegating the task of presenting this award to me, since I have known Dave for many years and drawn heavily on some of his work myself.

David Craw has an exceptionally wide-ranging track record in his publications. When I first met Dave, he was primarily a field geologist, but over the years, Dave has kept asking questions about everything that seems important, and his contributions now cover an enormous range of fields from environmental mineralogy and geochemistry, to ore-deposit genesis, tectonics, biogeography, sedimentology, hydrogeology, geomicrobiology and mine-waste remediation. When I checked out his full publications I thought for a while that there must be at least two people with the name Dave Craw in the Otago department.

In the early part of his career, David was involved in the controversy about fluid transfer in mountain belts, a problem which had fundamental implications for heat and mass transfer mechanisms in the crust. He combined theory, observation, and cutting edge analytical techniques to address this problem, and ultimately convinced his peers that fluids play multiple roles at depth during the rapid uplift of mountain belts. He used his insights about both fluids and active tectonics to consider how metals become concentrated into ore-deposits during mountain building events. In the Southern Alps, he demonstrated the existence of two-flow systems, one at high crustal levels and another at greater depth. He showed how these fluids form gold deposits on a regional scale during orogenesis. In my view, Dave was the first to crack a fundamental problem with classic 'orogenic' gold deposits, reconciling evidence for metamorphic fluids with evidence for formation on a very rapid timescale, before most researchers had understood that this was a problem.

From his involvement with gold mining, Dave went on to consider the association of gold with elements such as arsenic, antimony and mercury, and has also undertaken significant research on the mobility of toxic elements in the environment, from mines and waste heaps. This has led to work with the New Zealand Department of Conservation about environmental issues around historic gold mines, and the problems of public safety on potentially hazardous mine sites.

His research output is prodigious, with over 300 papers and nearly 6,000 citations. He has supervised 38 MSc students and 20 PhD students, many of whom have gone on to scientific careers of their own. To quote one of the supporters of his nomination: "He is an excellent, inspiring and generous colleague … and… is thoroughly deserving of recognition by his peers."

Professor Craw, it is my pleasure to present you with the 2018 Collins Medal of the Mineralogical Society.

**Acceptance Speech (Dave Craw)**: Thank you very much, Bruce, for your kind words, and to the Mineralogical Society for this honour. It is very much appreciated, especially after such an august previous recipient, Bruce. I was surprised to be awarded this medal, and I had to quickly investigate its origins via the internet and the history of Joseph Collins who was a founding member of the Mineralogical Society. I was very pleased and proud to find that Collins was, like me, an applied geologist associated with the mineral industry. In fact, I have just returned from Cornwall [UK], visiting Professor Karen Hudson-Edwards, who nominated me for this award, and we had an excellent day at St Austell kaolinite mines where Collins spent some of his working life. His interests in applied mineralogy were instrumental in improving the economics of the mining there, and some of those methods are still in operation more than 100 years later. Also, when researching local context for a talk on gold I gave last week at Camborne School of Mines [Cornwall, UK], I discovered that Joseph Collins wrote some of the most useful information on Cornish gold in a paper published in 1910. I am very pleased to be acknowledged to be following in such august shoes. Thank you again for this great honour.

## GRANULITES AND GRANULITES 2018

The Mineralogical Society's Annual Meeting for 2018 is 'Granulites and Granulites 2018', which is being held 10–13 July 2018 in Ullapool (Scotland), with a preceding fieldtrip to nearby classic locality, Assynt, and a post-meeting trip to SW Norway. By the time you read this, the event will have been and gone, with, hopefully, 100 happy geologists safely back home. A full report will follow in the October 2018 issue of *Elements*.