



Editorial: The June 2023 cover paper

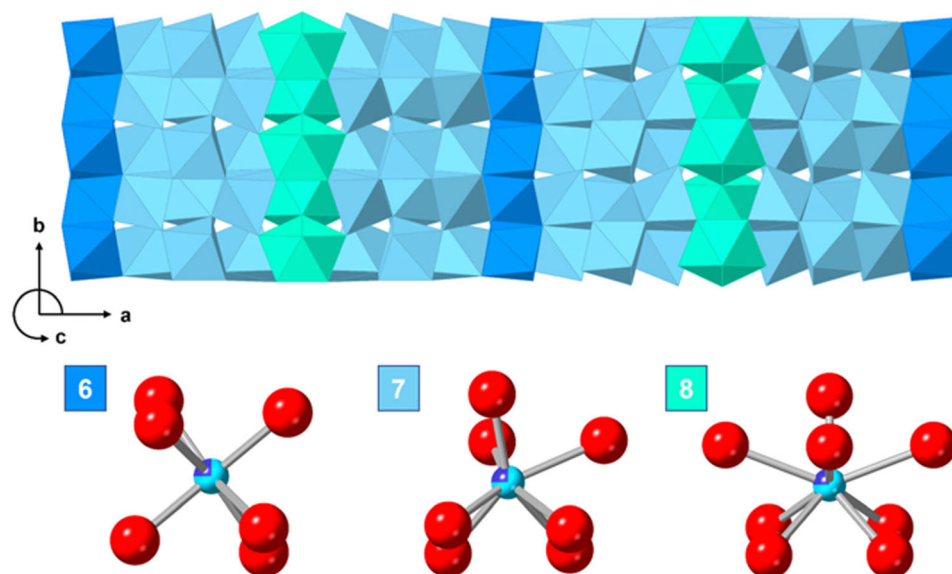
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GRAPHICAL ABSTRACT



The cover for the June 2023 issues of the Journal of Materials Science comes from the paper by Spurling et al., which appeared in issue #14 from April 2023 [1]. The paper was handled by David Cann, one of our Editors whose own research emphasizes ceramics; it is entitled “Phase equilibria and metastability in the high-entropy $A_6B_2O_{17}$ oxide family with $A = \text{Zr}$, Hf and $B = \text{Nb}$, Ta .” It is part of our “Ceramics” Topical Collection.

The paper uses X-ray diffraction (XRD) at different temperatures and both imaging and X-rays energy-dispersive spectroscopy (XEDS) in the SEM to examine changes that occur in this high-entropy oxide. Figure 5 shows a nice use of color in a set of XRD patterns, which themselves are so nicely presented. The paper is essentially a classical study of a ceramic material with the twist that these high-entropy ceramics had not been recognized as such until

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quite recently. An accessible recent introduction and overview of high-entropy materials (including a comparison of horses and zebras) is given by MRS Bulletin Editors George and Ritchie [2].

Figure 1 of the paper illustrates how CrystalMakerTM (see <https://www.crystallmaker.com/>) can help make even this complicated structure more understandable. Of course, the present author is biased having used CrystalMakerTM extensively in illustrating structures in ceramic materials [3]. The paper references the initial discussion of this material [4, 5].

Like all articles in JMS, this paper does also have a SharedIt link (<https://rdcu.be/dcJeq>) so it can be widely and immediately shared with readers along with the extensive supplementary data; all papers published in JMS are free-to-read in their published form using the SharedIt link from the moment they appear online with their permanent DOI.

References

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