EDITOR'S CHOICE

Figures appearing in EDITOR'S CHOICE are those arising from materials research which strike the editor's fancy as being aesthetically appealing and eye-catching. No further criteria are applied and none should be assumed. When taken out of context, such figures often evoke images beyond and unrelated to the original meaning. Submissions of candidate figures are welcome and should include a complete source citation, a photocopy of the report in which it appears (or will appear), and a reproduction-quality original drawing or photograph of the figure in question.



Background Removed

We scientists of the modern era arrogate to ourselves the privilege of distinguishing between real objective phenomena of nature and those kinds of pseudoscience that issue from the union of subjectively perceived systematics and wishful thinking. How many thousands of lay and trained people have examined the various alloys of nickel, chromium, and iron? In some compositions, we have them in our kitchens, our flatware, and our vacuum chambers. Yet no one has reported unearthing evidence of the ancients, remnants of the technological accomplishments of extinct civilizations in these materials. Of course, they hadn't viewed their specimens from far enough away, from the right angle, nor with electrons instead of light. If you were skeptical of the astronomical or extraterrestrial significance of the patterns of lines only visible from the air on the tablelands of Southern Peru, then you will no doubt also doubt the crystallographic textural significance of the lines in this month's EDITOR'S CHOICE. The explorers who reported this evidence (V. Thaveeprungsriporn, J.F. Mansfield and G.S. Was, J. Mater. Res. 9 [1994] 1887-1894) note that to see it, electrons from a finely focused beam directed at a Ni-16Cr-9Fe specimen in an environmental scanning microscope had to backscatter, diffract, and be detected by a phosphor screen under the watchful eye of a CCD camera. Even then, the naked CCD eye was not enough. They then had to digitize the images, average over many such observations, and remove a large background contribution before the specimen would give up this buried structure. They attribute the pattern to the long- and well-known internal crystal structure and to the orientation of the alloy grains. Others, notably Kikuchi[†], have ascribed similarly objective origins. But who is to say if these are not also the faint imprint of an early hand in an otherwise amorphous world?

⁺S. Kikuchi, Japan. J. Phys. 5 (1928) 83.

