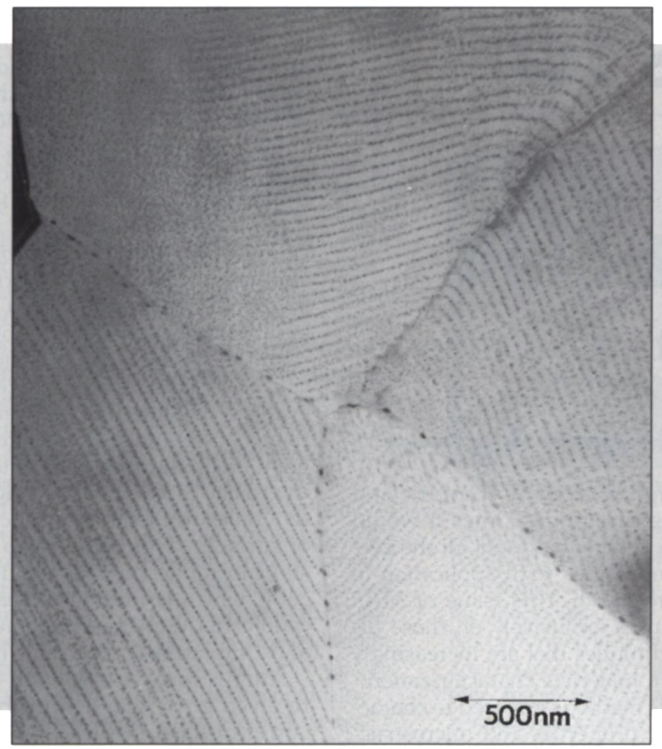
Figures appearing in EDITOR'S CHOICE *are those arising from materials research which strike the editor's fancy as being aesthetically appealing and eye-catching. No further criteria are applied and none should be assumed. When taken out of context, such figures often evoke images beyond and unrelated 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.*



This month's EDITOR'S CHOICE may well be a seamstress's attempt to deceive. What clearly seems to be a close-up on the product of pin-striped remnants at a quilting bee is advertised to EDITOR'S CHOICE as a transmission electron micrograph of a rapidly solidified alloy of titanium and erbium (1.7 at.%) metals. There is even a publication that supports this thesis (M.V. Kral, W.H. Hofmeister, and J.E. Wittig in *Synthesis/Processing of Lightweight Metallic Materials*, edited by F.H. Froes, et al. [The Minerals, Metals & Materials Society, Warrendale, PA 1995] p. 27ff). The claim is that if one melts this alloy while electromagnetically levitated (the metal, not the experimenter) and lets it (under)cool below its normal freezing point while it plummets three meters through high vacuum to a rotating copper wheel where it unceremoniously splats and spins off as a solid, this microstructure is made. The seams are grain boundaries of the low-temperature phase, alpha-titanium. The pin stripes in the grains result from precipitation of erbium and erbium sesquioxide along the vestiges of rapidly propagating ledges at the short-lived interphase boundary between the high-temperature phase, beta-titanium, and the alpha phase as the former transforms to the latter during cooling of the solid. The seamstress would have us believe that all four alpha grains coincidentally lined up their sheets of precipitates at right angles to the plane of the TEM specimen just for this picture. They must have been psychic. This led EDITOR'S CHOICE to consult a modern soothsayer, a specialist in palmistry. After reading the technical article and comparing it to the palm print seen in the figure, to our consternation, he supported the authors' claims. The authors had noted that this very same microstructure occurs when splat quenching between copper anvils, but only when the solidification rate is not too fast, that is, in the region of the splat where there was no intimate contact between sample and anvil. The rapid quenching already accounted for the short life line of roughly 2.5 microns and now the short love line (3 microns) was explained. We could hardly argue with the facts.

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* Please visit us at the Exhibit, December 3–5, during the 1996 MRS Fall Meeting/ICEM-96 in Boston.

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