

And more news...

Breaking Speed

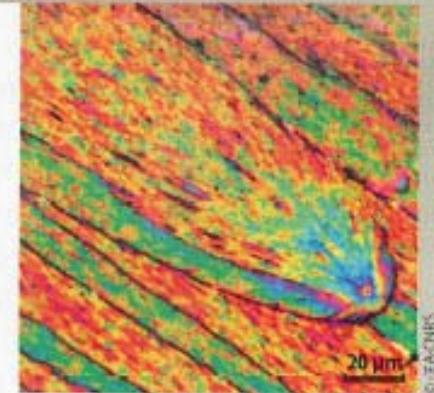
→ When a brittle material breaks, the speed of microcrack propagation is in fact four times lower than theory-based predictions. This was shown by a French team¹ who studied the phenomenon in Perspex.² To their surprise, researchers observed that all microcracks

propagate at the same speed of 200 m/s, independently of the force applied, and contrarily to what is observed at the macroscopic level, where the speed of a crack's propagation depends on the force applied. These results emphasize the role that micro-defects can

play in the rupture of materials, and should make it possible to improve their resistance to cracks.

01. From IRAMIS (CEA Saclay), LTDS (CNRS / ENI St-Etienne / Ecole centrale de Lyon), and SVI (CNRS / Saint-Gobain).
02. *PNAS*, 2012, 109: 390-4.

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→ The mark left by a microcrack detected by polarized light microscopy of the fracture surface.