

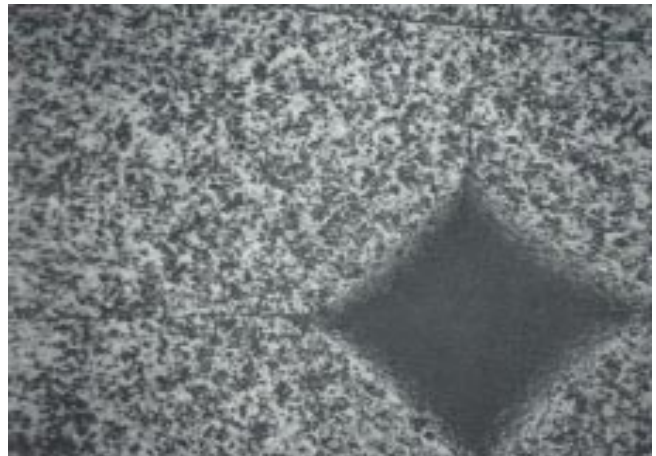
# acoustic microscopy

## Ceramics

**Figs. a, b and c** show **ceramics**. The hardness of an industrial material is often measured by the Vickers method, in which a diamond pyramid is indented in the material at a defined force. The size and shape of the indented area depend on the hardness and previous treatment of the material.

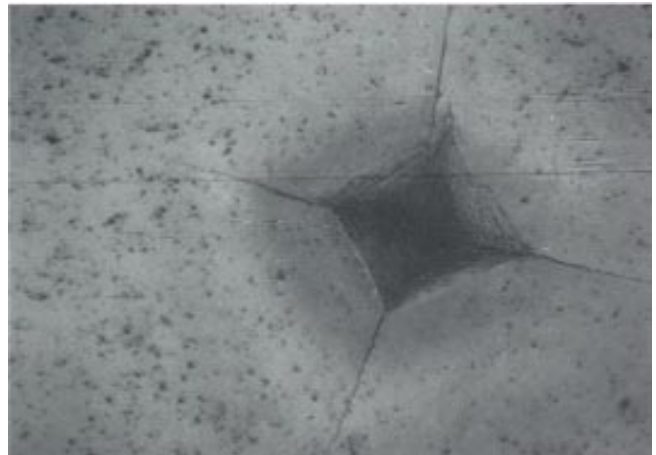
**Fig. a:** Vickers hardness indentation in  $\text{Al}_2\text{O}_3$  ceramic sample. Crack formation at the corners of the pyramid depends on the ductility of the material.

**Frequency :** 1.3 GHz  
**Image width:** 312  $\mu\text{m}$



**Fig. b:** Hardness indentation in a  $\text{Si}_3\text{N}_4$  ceramic sample.

**Frequency :** 1.3 GHz  
**Image width:** 500  $\mu\text{m}$



**Fig. c:** Hardness indentation in a metal alloy. The brighter area round the Vickers imprint shows the deformation of the material caused by the inclined areas of the pyramid..

**Frequency :** 1.3 GHz  
**Image width:** 100  $\mu\text{m}$

