



## Sonderforschungsbereich 595 Elektrische Ermüdung in Funktionswerkstoffen



TECHNISCHE  
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### **Piezoelectrets and their Applications**

Piezoelectrets are cellular polymer films with lens-shaped voids which possess a macroscopic polarization consisting of charges of opposite polarity on opposing void surfaces. Such materials show piezoelectric  $d_{33}$ -coefficients more than ten times larger than those of the best non-cellular polymers and even higher than those of PZT. Other advantages of piezoelectrets are their flexibility and their low mechanical impedance. Studies over the last years were focussed on the understanding of these materials and progress was made with respect to thermal stability and piezoelectric activity. Among the applications realized are microphones, tweeters, ultrasonic transducers, accelerometers, and pressure sensors. Recent results on these materials and their applications will be discussed.

Die Vortrag findet um **16:15 Uhr** im Gebäude der Materialwissenschaften,  
Lichtwiese, Petersenstr. 23, **Raum 77** statt