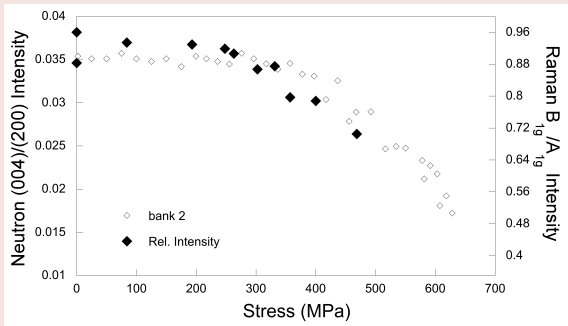
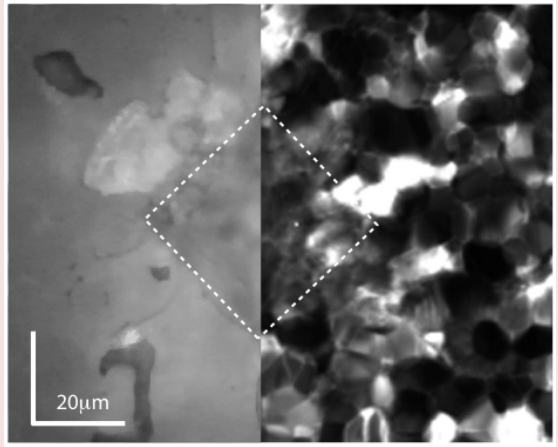


Molly M. Gentleman

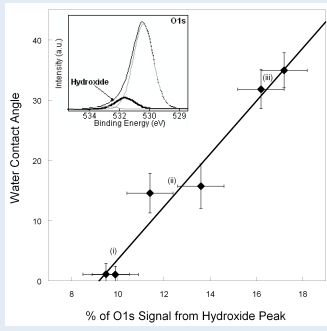
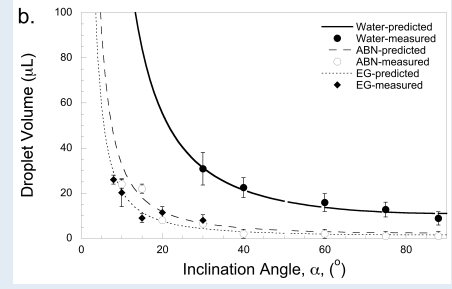
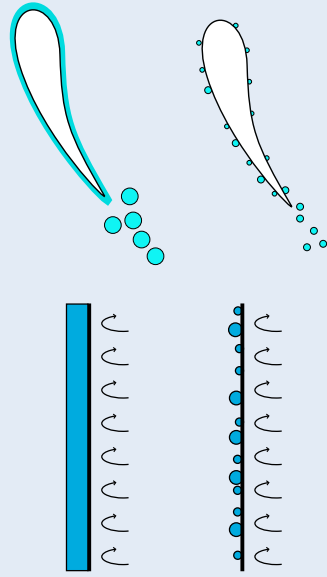
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High toughness ceramics



Using Raman spectroscopy to measure the coercive stress and process zone size of ferroelastic ceramics we can understand the relationship between toughness and doping regimes

Water shedding



Modifying the polar surface free energy of ceramics allows us to control their liquid shedding properties allowing us to tailor surfaces for specific applications

Biological surfaces

Modifying the surface free energy of oxides for biological implants can change the rate of bone mineralization of that surface

