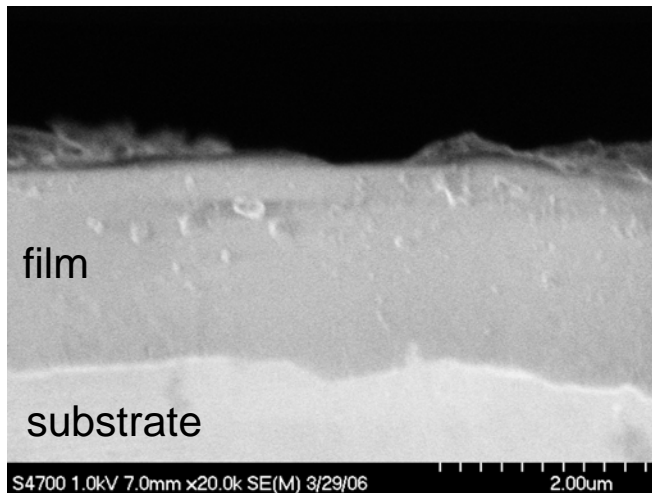


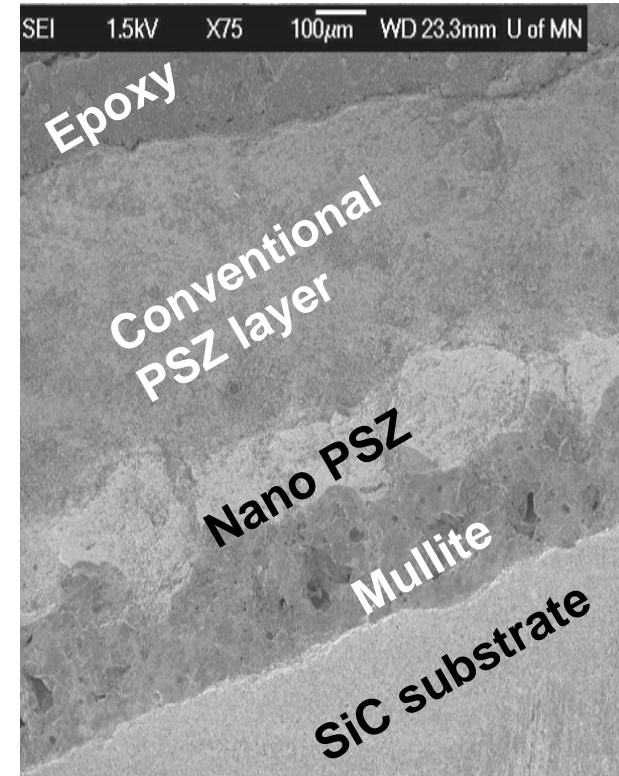
Nano-phase Coatings with Special Properties

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- **Ultrahard Nanophase Coatings**
 - Si-C-N nano-composite deposited in Triple Torch Plasma Reactor
 - c-BN coatings deposited in supersonic plasma jet reactor
 - characterized in Charfac using SEM, XRD, FTIR



Cross-section of hard, wear-resistant Si-C-N film



- **Novel multilayer thermal barrier coating with nano-phase strain accommodation layer**
 - reduces thermal expansion mismatch between SiC and zirconia
 - characterized in Charfac using SEM, XRD