

Nanocones as New Probes for Scanning Electrochemical Microscopy

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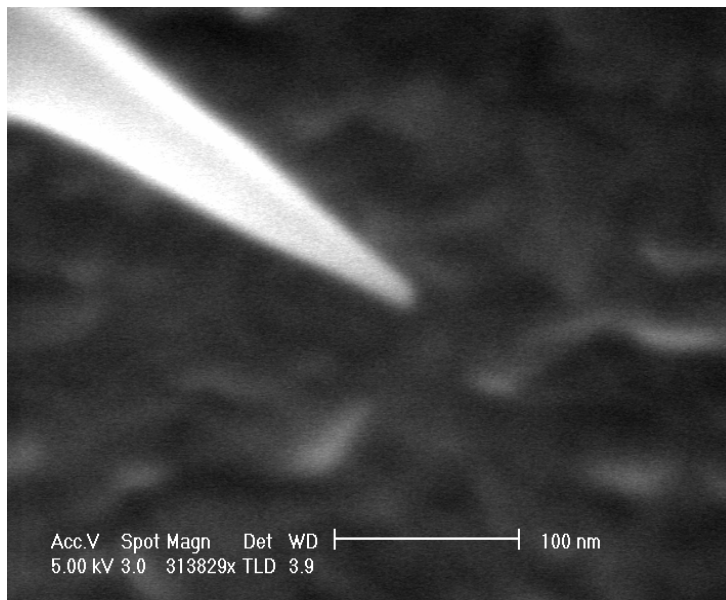
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We are developing cone-shaped silicon and metal nanocones (NC) by vapor-liquid-solid (VLS) growth and using them as a new type of scanning electrochemical microscopy (SECM) probe. These tips have the advantage of a sub-5 nm end radius and a controllable aspect ratio. The NCs offer the possibility of having both high spatial resolution and stable base support for the probe tips, which is a distinct advantage over the straight nanowire probes. We are exploring the NC SECM to study interesting biological processes such as ion channel dynamics.



Scanning electron micrograph
of a silicon nanocone