275d Oxide Nanostructures for Energy Conversion

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Oxide nanowires and nanotubes were produced using a templating technique. Polymer templates were produced using electrospinning. The templates were then coated with an oxide material using plasma enhanced deposition techniques. The composition and morphology were controlled by controlling the deposition conditions.

Applications for these oxide nanostructures include thermophotovoltaic devices and fuel cells. The properties of the structures produced will be related to their function in these devices.