

# Method of Forming Pointed Structures

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## DESCRIPTION

The method involves depositing a ferrofluid on a substrate, applying a magnetic field into the ferrofluid to generate an array of surface protrusions, and solidifying the surface protrusions to form an array of pointed structures. The magnetic field is substantially uniform.

## FEATURES AND BENEFITS

- Enables formation of high quality array of pointed structures, without requiring equipment that is prohibitively expensive and materials that require special handling and are prone to breakage.
- Unlike other methods that yield arrays of limited size, this process has the potential for large-scale (>4") fabrication of pointed-tip arrays.
- The method yields a template of needle-like tips uniformly aligned and with a high aspect ratio.

## APPLICATIONS

- Microscopy
- Field Emitter Arrays
- Nanotechnology
- Surface Profiling
- Low-Power Propulsion Systems

## FOR MORE INFORMATION

If you are interested in more information or want to pursue transfer of this technology, GSC-14871-1, please contact:

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