

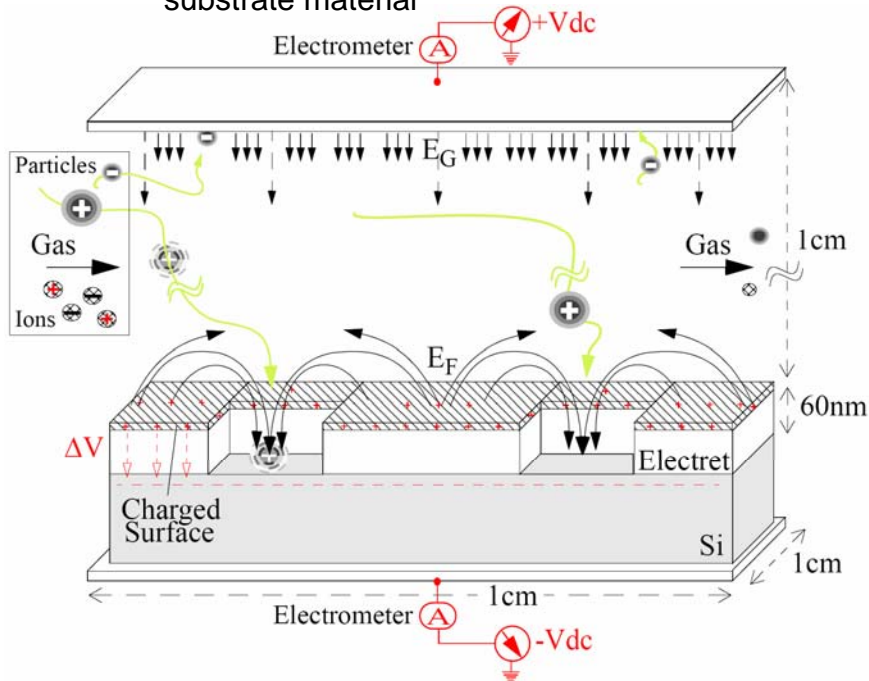
Fringing Field Directed Assembly of Nanomaterials

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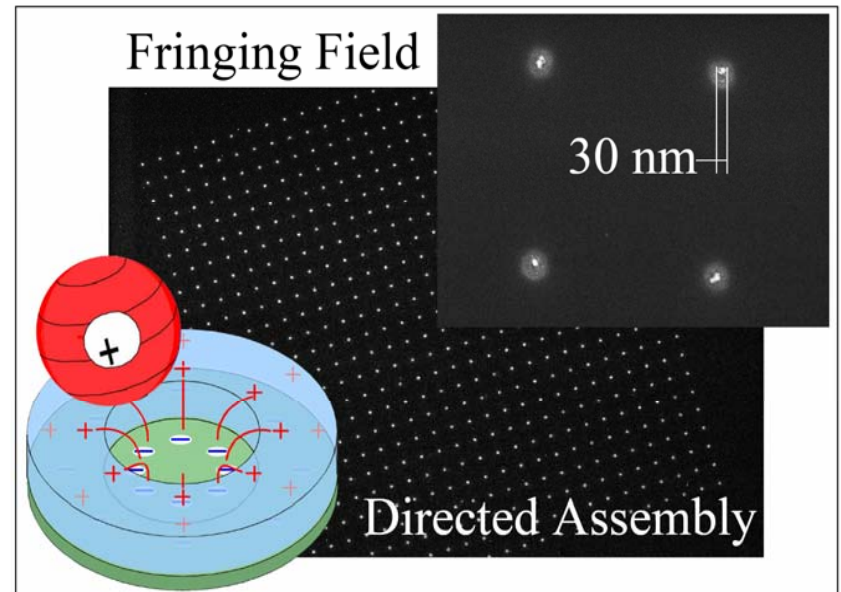
DESCRIPTION OF WORK

- ◆ Designed sub-micron and sub-100nm structured substrates by electron beam lithography
- ◆ Designed an inline corona charging process to enhance local electrostatic fringing fields
- ◆ Characterized the built in potential difference between the nanostructured film and underlying substrate material



MAJOR OBSERVATIONS

- ◆ Developed an assembly process that uses nanostructured substrates that act as nanolenses to focus particles into the center of the patterned areas with 3 fold size reduction
- ◆ Accomplished Sub-50nm assembly resolution



Publications

- ◆ Chad R. Barry and Heiko O. Jacobs, Nano Lett., 6 (12), 2790-2796, (2006)
- ◆ Chad R. Barry, Jie Gu, and Heiko O. Jacobs, Nano Lett., 5 (10), 2078-2084, (2005)