

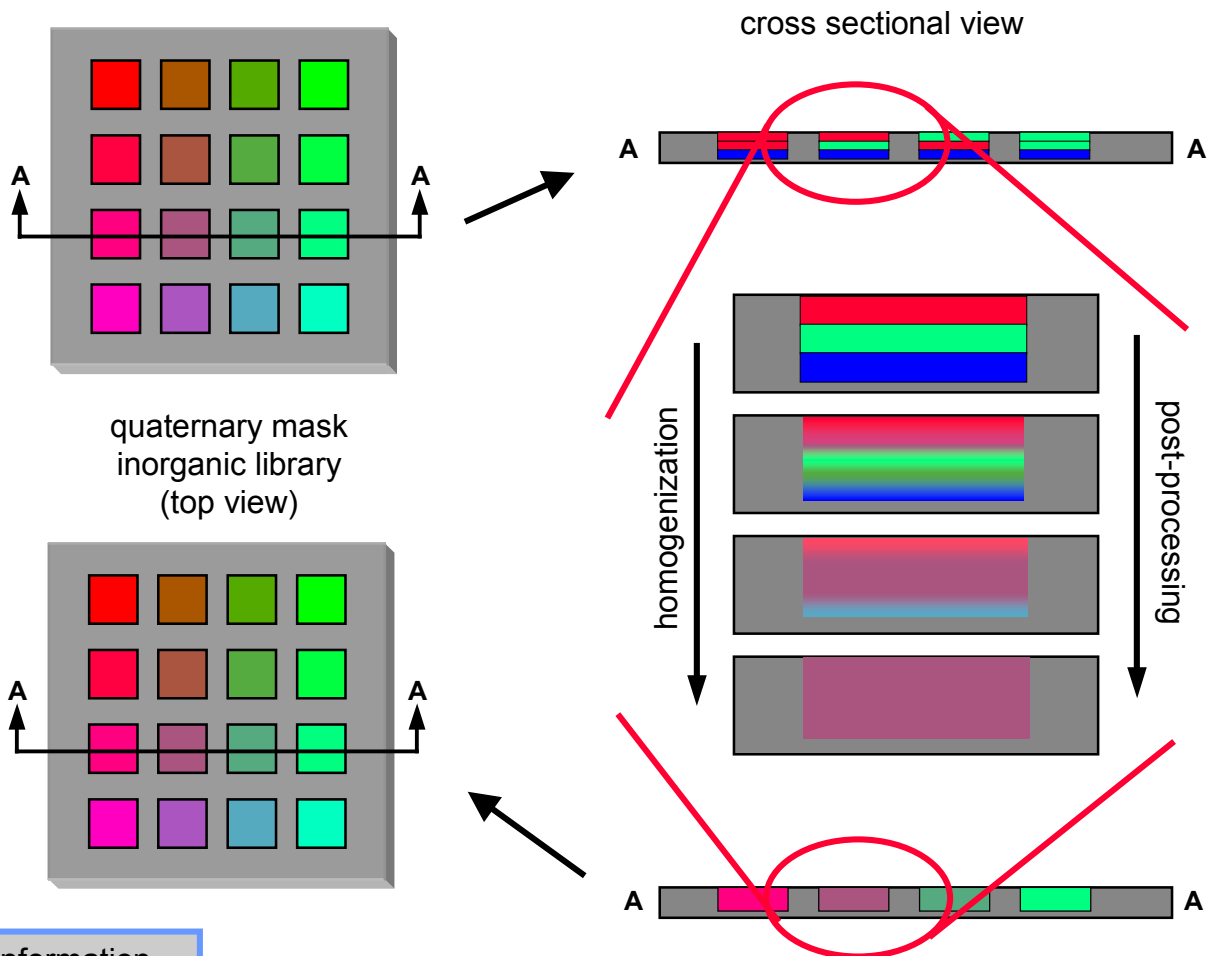
Library production support

- Critical Issues

- The production of inorganic combinatorial libraries using repeated mask-based deposition of thin films assumes subsequent processing will homogenize the components. In many specific systems the efficacy of this homogenization has not been studied carefully.

- Research Strategy

- The objective of this research is to determine the chemical and structural inhomogeneities of processed libraries synthesized by repeated deposition of thin films of inorganic components. The library cells are cross sectioned and analyzed in an analytical electron microscope using energy-dispersive x-ray spectrometry, elemental mapping, and electron microdiffraction. Information about the phase purity, degree of interdiffusion, and residual chemical gradients in the sample allow informed development of library production and processing.



For more information ...