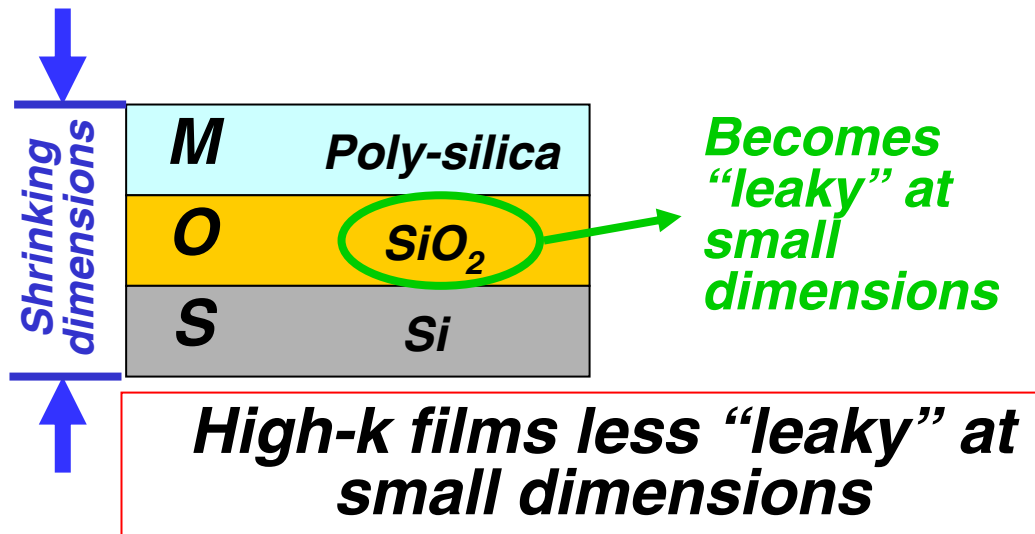
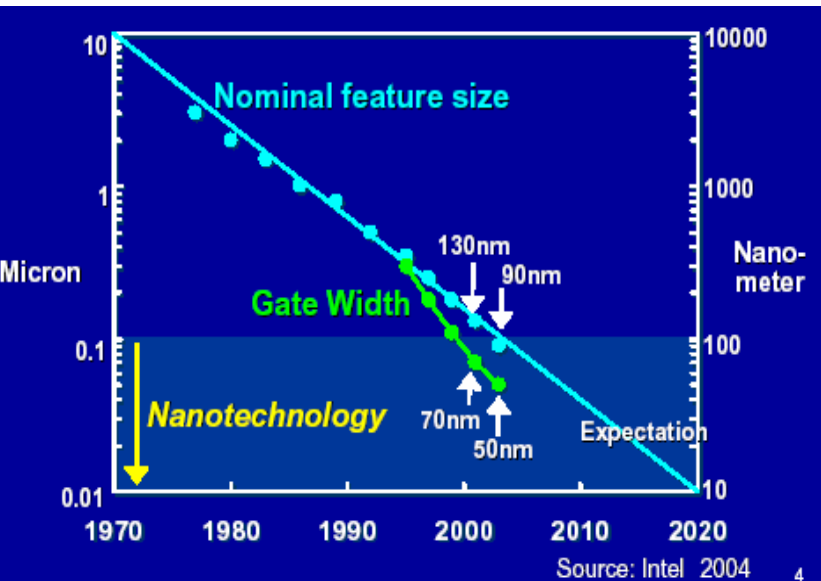


Combinatorial Materials Exploration (CME) of SrTiO_3

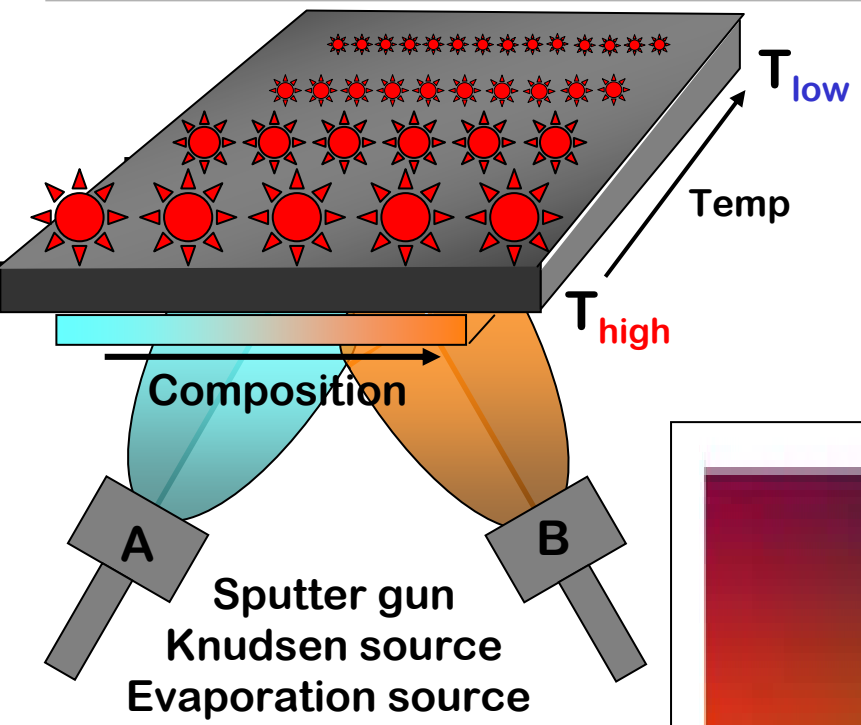
Christina Polwarth
Micron Technology Foundation
Materials Science and Engineering
November 28, 2006

Optimization of super high-k films for memory devices using combinatorial methods.

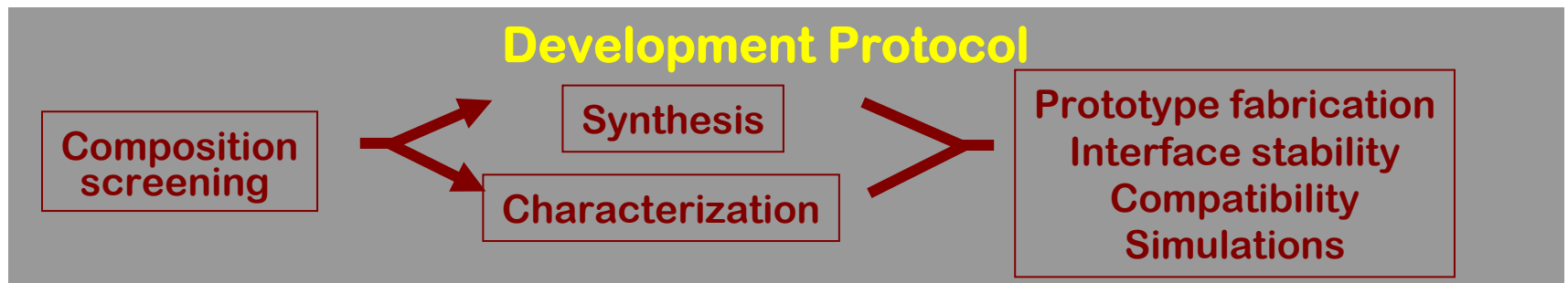
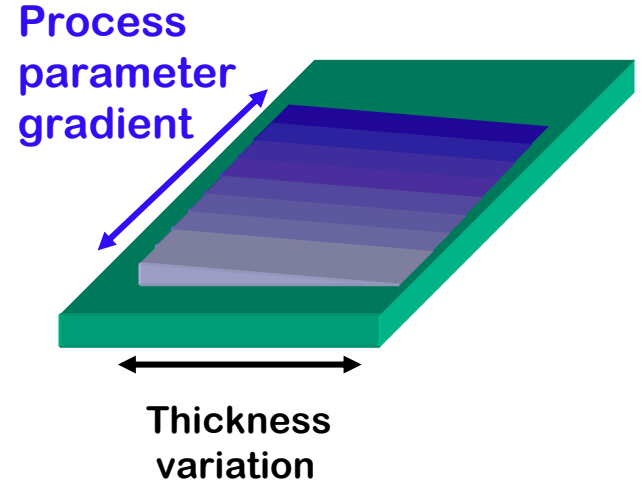
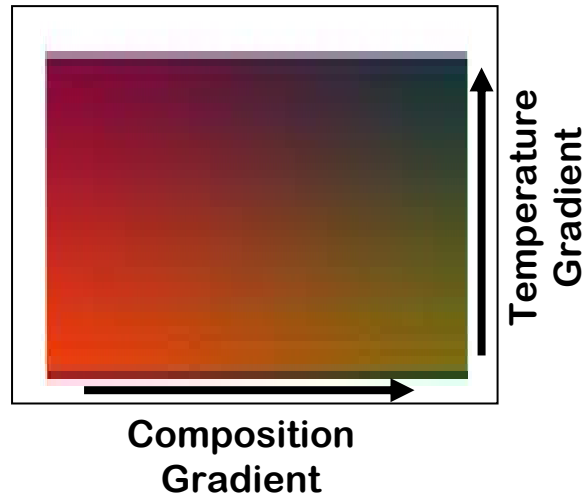


SrTiO_3 UNIVERSITY OF WASHINGTON

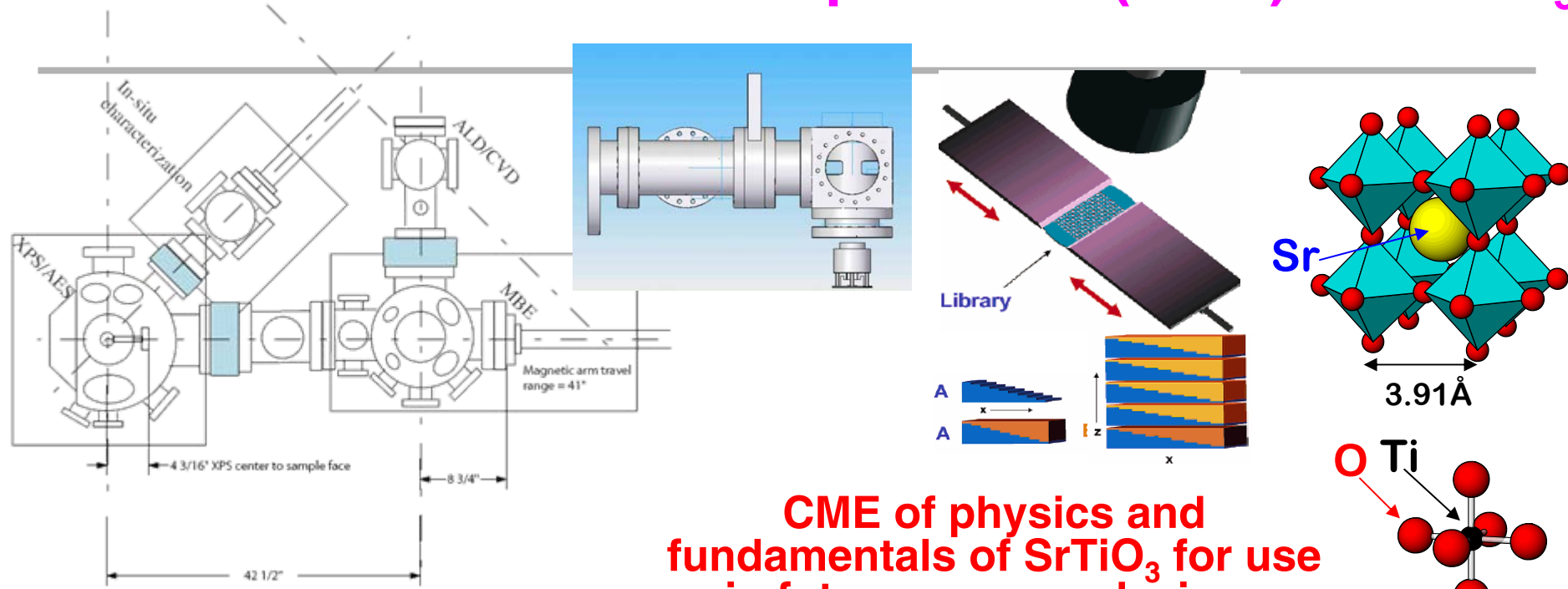
Combinatorial Materials Exploration (CME) of SrTiO₃



Combinatorial Material Exploration (CME) – allows for rapid screening of a wide range of materials and process conditions



Combinatorial Materials Exploration (CME) of SrTiO₃



CME of physics and fundamentals of SrTiO₃ for use in future memory devices

2007 - 2009

Tentative Timeline

2006 - 2007	2007	Summer 2007	2008	Summer 2008	2009
Design and assembly of CME system (MBE, ALD, XPS)	Qualifying Exam	Strategic Process R&D, Micron	General Exam	Strategic Process R&D, Micron	PhD



THE CENTER FOR NANOTECHNOLOGY



UNIVERSITY OF WASHINGTON