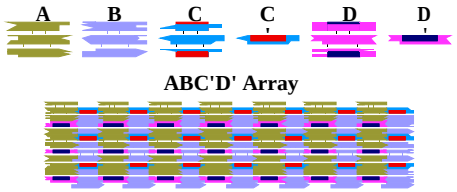
NYU SUBCONTRACT

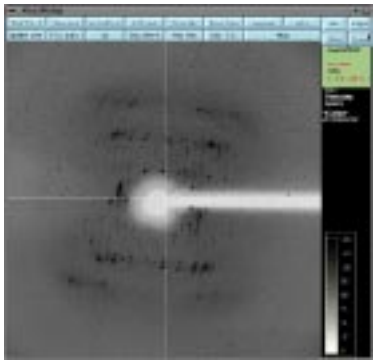
DIRECTED ASSEMBLY OF 3D NANOSTRUCTURE ARRAYS

NADRIAN C. SEEMAN, NEW YORK UNIVERSITY

SCIENTIFIC OBJECTIVES:

DESIGN 3D CRYSTALLINE ARRAYS FROM DNA.





NEW IDEAS:

SELF-ASSEMBLY OF DNA FOR CONTROL OF NANOSTRUCTURE.

DESIGNED CONNECTION BETWEEN THE MOLECULAR AND MACROSCOPIC SCALES.

DIRECTING THE ASSEMBLY OF BIOLOGICAL AND NANOELECTRONIC MOLECULES BY DNA SCAFFOLDING.

IMPACT:

ELIMINATION OF THE MACROMOLECULE CRYSTALLIZATION PROBLEM -- RATIONAL CONSTRUCTION OF CRYSTALS TO SOLVE PATHOGEN PROTEIN 3D STRUCTURES.

FACILITATION OF NANOELECTRONICS THROUGH DNA-DIRECTED SCAFFOLDING.

IMPLEMENTATION OF NANOROBOTICS.

SCHEDULE