

Abstract Submitted  
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**A novel method for size uniform 200nm particles: multimetallic particles and in vitro gene delivery** LAMAR MAIR<sup>1</sup>, KRIS FORD<sup>2</sup>, RICHARD SUPERFINE<sup>3</sup>, University of North Carolina at Chapel Hill — We report on the fabrication of arrays of mono- and multimetallic particles via metal evaporation onto lithographically patterned posts. Metal particles evaporated on cylindrical structures  $0.20\mu\text{m}$  in diameter and  $0.33\mu\text{m}$  tall are released via photoresist dissolution, resulting in freely suspended, shape defined particles. These Post-Particles have highly tunable composition, as demonstrated by our deposition of five different multimetallic particle blends. We calculate the susceptibility and magnetization of 200nm Fe particles in an applied 0.081T magnetic field. In order to evaluate their usefulness as magnetofection agents an antisense oligonucleotide designed to correct the aberrant splicing of enhanced green fluorescent protein mRNA was successfully attached to Fe Post-Particles via a polyethyleneimine linker and transfected into a modified HeLa cell line.

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