## **Supplementary Information**

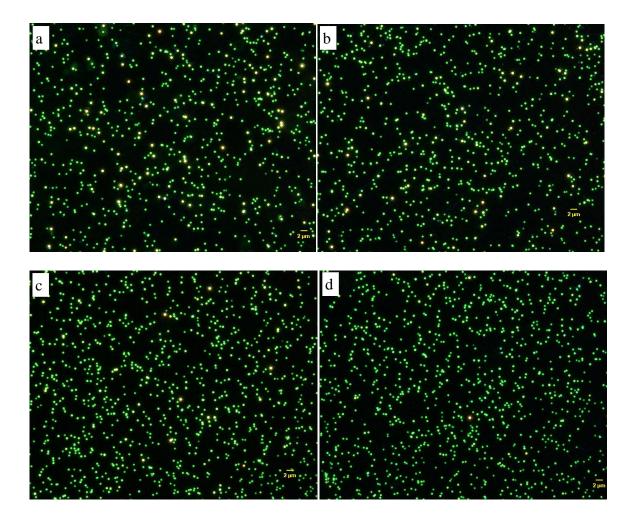


Fig S1. Dark field micrographs of Scheme 1, recorded after 24h hybridization. The nanoassemblies were formed by hybridizing nAu-T and nAu-H to 28b targets of (a) perfect-match P, (b) H-single-mismatch MH, and (c) T-single-mismatch MT at 4pM target concentration; (d) The control is absence of any target DNA. Each sample contains 1pM of nAu-T and 1pM of nAu-H. Images were taken from the bottom plane of the liquid chamber where the particles had settled. Buffer: 140mM Tris, 140mM NaCl, 2mM MgCl<sub>2</sub>