

SEMİNER

Elektrik-Elektronik Mühendisliđi Bölümü

Tarih:17 Mart 2014

Saat:15:00

Yer: EE Bolumu Yorgo İstefanopulos Seminer Salonu

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"Engineering and Fabrication of Assembly Platforms for Micro/Nanoscale Delivery Systems".

An important emerging concept in nanomedicine is that of “theranostics”, viz., the ability of a micro/nanoscale delivery system to integrate several functions so that these are co-localized. Such micro/nanoparticle systems are complex and require specialized platforms that are able to (1) help with high throughput assembly of multicomponent particles, and (2) are able to validate particle targeting and payload release in a physiologically relevant context. In the first part of this talk I will describe such a theranostic delivery system, which is based on microbubbles. I will portray the motivation behind these particles and then I will talk about the assembly platforms I have worked on to prepare these particles. In the second part of my talk I will explain the process of fabricating thermoplastic assembly platforms and the motivation behind moving towards thermoplastic-based microfluidic devices. I will describe various approaches I have investigated in thermoplastic device fabrication and the current progress on these approaches.