

## Organic/Inorganic Hybrid Nanostructure Arrays for Sensors and Electronics

고현협\*

울산과학기술대학교 나노생명화학공학과

(hyunhko@unist.ac.kr\*)

The ability to tune the electrical, optical, and mechanical properties of organic/inorganic hybrid nanostructure arrays make them versatile materials for a wide range of applications. Here, we present several different types of hybrid nanostructure arrays for sensors and electronics, which can be potentially integrated into flexible, multifunctional electronic systems. We exploited vertical nanowire (NW) arrays to design hybrid nanostructured surfaces, which can be easily tuned to provide strong adhesion, self-cleaning superhydrophobic properties, electrical connection, and resistive pressure sensors by manipulating the composition of hybrid nanostructures. We also demonstrated heterogeneous integration of parallel NW arrays on flexible substrates for pressure-sensitive artificial electronic skins.