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*New Trends of MEMS/NEMS based on Heterogeneous Process Integration - Towards Life/Green Innovation*

The technological revolution is essential for providing future innovation. With the saturation in the miniaturization of microelectronics as well as the maturity of MEMS, now further advance in MEMS/NEMS technology is required. In this talk, I will propose a heterogeneous integration technology combining various fabrication methods. We can utilize micromachining, VLSI (very large scale integration) silicon microelectronic technology, compound semi-conductor technology, nano technology, bio technology, organic/inorganic chemistry, printing and molding to create a versatile manufacturing technology. Each technology offers the capability to realize specific functionality in different scales with different materials. This talk deals with the concept towards the heterogeneous integration of devices and functionality into micro/nano systems, the current development trend, and its potential contribution to life and green innovation.