Efficient fabrication of micro- and nano-systems - DTU Orbit (11/01/2019)

Efficient fabrication of micro- and nano-systems

There is an increasing demand for a more sustainable society where unnecessary use of the World’s energy resources is avoided. Micro- and nano-fabricated sensors and actuators are in that sense desirable in many applications for power saving purposes, minimization of chemical consumption, rapid analyzing of e.g. waste water before it is lead out in our lakes and oceans or as sensors notifying when maintenance is required in due time before breakdown. More and more of these sensors are also made self-sufficient of power by harvesting the energy from e.g. the sun, thermal excess energy, environmental vibrations or human motion, which means that they can be placed for monitoring on sites that are otherwise unreachable with no further powering and communicate with the outside world through wireless communications. There is no doubt that the use of micro- and nano-devices for sustainability has come to stay and will further develop in the future.

In Danchips clean room facilities realization of micro- and nano-devices are possible. It is of most importance that they are carefully designed and modelled before initiating the fabrication itself in order to keep the number of iterations at a low level as well as minimizing the consumption of materials, etchants and process time. Danchip excels in optimizing micro- and nanofabrication in order to simplify processes, minimize cost and at the same time maximize yield. Danchips team of process generalists is ready to guide you through your design and planning phase as well as to help you realizing your micro- and nano-devices in our clean room facilities. Danchips team of process specialists will help you with developing and optimizing new fabrication processes so you can reach your goals most efficiently. Our dedicated technical staff supports the infrastructure and keeps the facilities up and running so you can focus on your research and not the equipment.

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