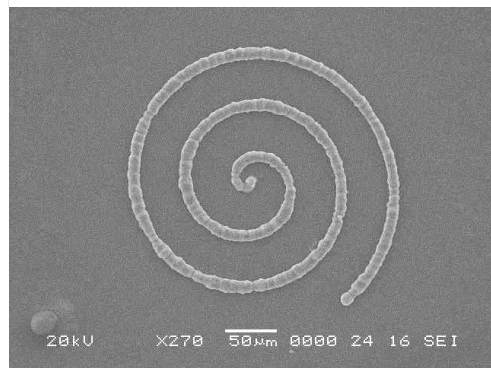
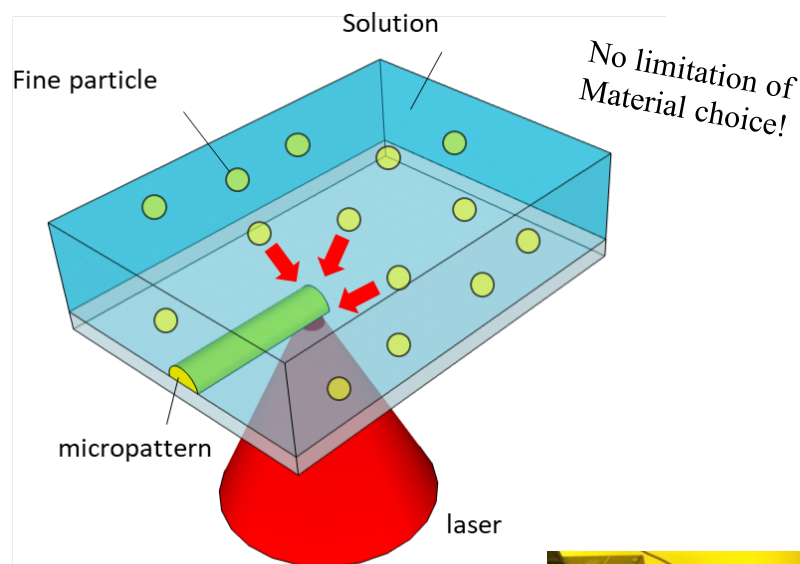


Laser Micro-/Nanofabrication & Optical MEMS

Assoc. Prof. H. Nishiyama

Versatile Direct Laser Writing



Micropatterns by DLW



Direct laser writing system

Content:

Versatile direct laser writing, not limited by material photosensitivity, was developed using ultrashort pulse laser irradiation. Direct laser writing is a powerful tool for 3D micro-/nanofabrication. However, there has been intrinsic limitation of material choice so far. Namely, DLW cannot be applied to non-photosensitive materials. Adequate optical properties of target material are essentially required. To overcome this limitation, our group has studied a versatile DLW, which is based on nonlinear light-based assembly process.

- Direct laser writing of functional materials
- 3D micro-/nanofabrication
- Laser-based assembly process in solution
- Multi-modal soft micro-actuators for micromanipulation

Appealing point:

We welcome collaborative research, particularly, with experts of nanomaterials and micro-/nanoscience. Our group has a wealth of research experience and resources on photo-excited phenomena.

Yamagata University Graduate School of Science and Engineering

Research Interest : Laser microfabrication,
Nanophotonics, MEMS

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