

Study on UV-light blocking systems for 3D printing with high blocking resolution

✓ Bachelor- / Studien- / Masterarbeit

3D printable piezoelectric materials can be used to manufacture various geometries of the sensors. However, the material requires extremely huge dose of UV-light. For this purpose, very powerful UV lamp is used which must be covered as needed, where needed to manufacture specific geometry piezoelectric sensor. Powerful UV-light source produces heat together with UV-light. Various techniques to block UV-light, pixel-by-pixel, must be investigated. This technique will be one of the main parts of high-performance DLP-type 3D printer.

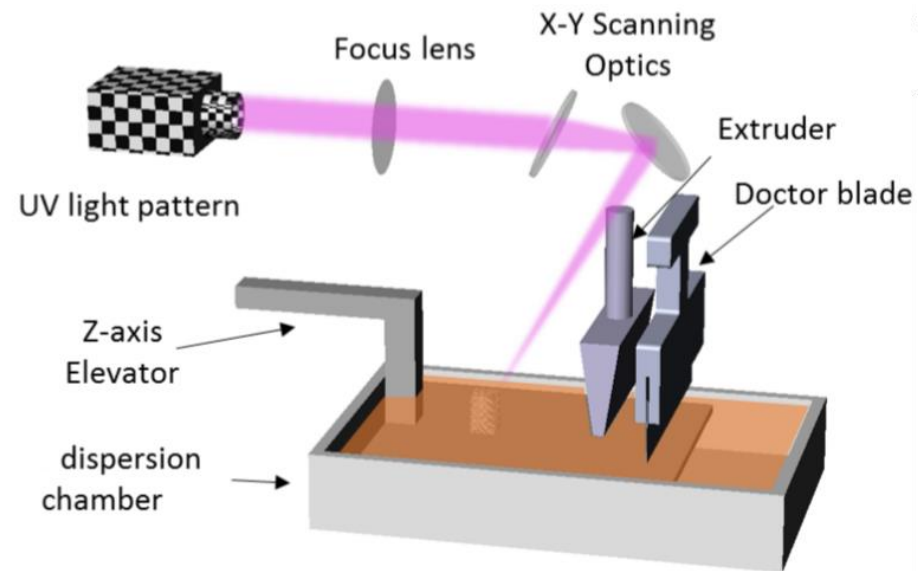
As a possible techniques, the use of black-white LCD screen is a first step towards high-resolution high quality printing. However, the equipment with high temperature resistance should be used. Another digitally controlled systems are of interest.

Tasks:

- Investigate and develop UV-light blocking device with high resolution
- Compare various light blocking techniques/methods
- Select suitable materials and design

Additional information:

- Multiple works on same topic possible (e.g. Studienarbeit + Masterarbeit)



Contact: Rytis Mitkus
r.mitkus@tu-braunschweig.de
Tel.: 391-2688, Room 101