Laser marking study

Mentor: Eileen Wu
Location: Hsinchu, TW
Duration: 6 months

Overview

The marking of different substrates is affected by conventional marking methods such as etching, cutting, and engraving. In these methods, the surface of the marked materials are altered and suffer damage. In this study, we are interested in changing the colour which is induced at the irradiated areas by process optimization and investigating the radiation-sensitive additive for different substates.

Objectives

- Deliver ready-to-use solution with Laser marking technique for product implementation.

At the end of the internship, the student will have to deliver:

- A Laser marking solution database including below items:
    - Laser source selection process
    - Process parameters optimization
    - Inorganic pigment as radiation-sensitive additive for Aluminum, ABS, PU/TPU materials

Knowledge/Skills

- Bachelor or graduate degree of Chemistry, Chemical Engineering, Materials Science
- Be able to communicate in English with foreign, in writing and speaking
- Be capable of assessing new concept design, making proposal with theoretical analysis and physical concept sample
- Familiar with material characterization and Surface analysis, ex. FTIR, AFM, SEM/EDS, XPS