

COMPETITIVE ADVANTAGES

- **Manufacture costs reduced** by 30%;
- **Increased mechanical resistance** (Wear resistance: + 50%, resistance to friction: + 30%).

APPLICATIONS/MARKETS

- Rapid 3D prototyping for industry.

INTELLECTUAL PROPERTY

- Patent FR 1254313;
- Collaboration sought: License for industrialization of the material.

LABORATORY

- Institut Jean Lamour (IJL).

CONTACT

Ludovic GOBY
Development officer
Materials, Processes, Chemistry
Tel.: 03.80.40.34.97 - 06.43.65.51.20
Mail: ludovic.goby@sattge.fr

PRESENTATION

Stereolithography is a rapid prototyping process, allowing the production of a 3D object, by superposition of liquid resin layers. These new compositions developed by the Institut Jean Lamour are made of photosensitive resin and complex metal alloys with remarkable mechanical properties: prototype pieces resistance is increased and production cost reduced, compared to pre-existing composite resins.

The prototyping process comprises a step of photo-polymerization layer by layer of the 3D prototype in a liquid medium, which contains the resin mixture and complex metal alloys, while exposing the liquid medium to UV laser radiation.

