

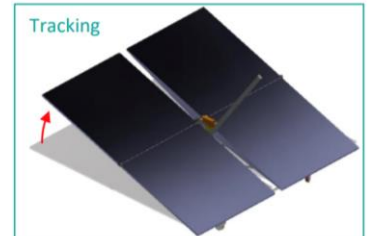
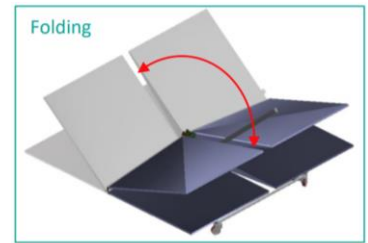
# The Patents

## FLAP-Heliostat

### Overview:

Heliostats are used to focus the light of a concentrated solar power plant on one focus point. Since this form of power plant can be often found in desert regions dust, abrasions from sand and high wind loads can reduce the performance and lifetime of such a mirror. All these shortcomings can be tackled by employing the FLAP-Heliostat concept, which is able to fold the mirror as well as track the sun via one axis using only one motor

### Face-to-Face Lay-down Anti-degradation Protection



### Potential Fields of Application:

- Concentrated Solar Power Plant
- Photovoltaic
- Portable LED Walls

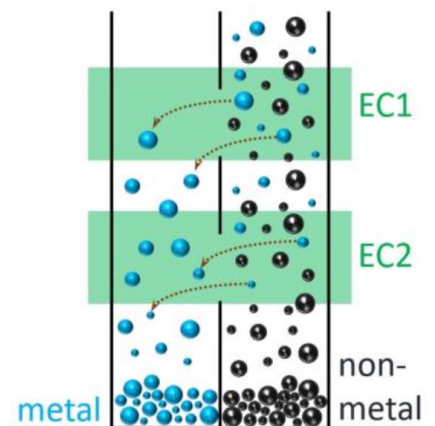
### Known Advantages

- Reducing soiling on mirror surfaces
- Reduced risk of sand abrasion
- Reduced wind loads on the structure during storms
- Lightweight design
- Lower Material Cost
- Tracking and Folding executed by one motor

## Metal Recovery from Waste

### Overview:

This novel design of an eddy current separator is optimized to extract non-ferrous metal particles (e.g. aluminium, copper, silver, gold) smaller than 1 millimetre, which is far below the conventional limit. This is enabled by optimizing the flow direction through multiple magnetic field zones that are closely stacked.



### Potential Fields of Application:

- Waste Industry
- Scraping for precious metals

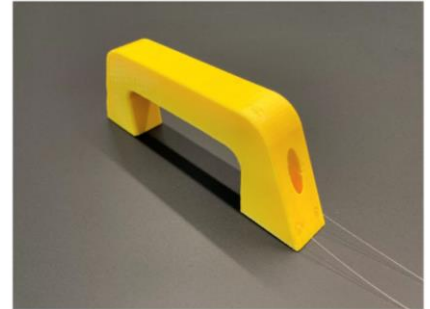
### Known Advantages

- Efficient separation of particles below 1mm
- Large scalability of the process in terms of target particle size and material
- High throughput
- No wear of the machine as there are no moving parts in contact with the material

# Production process and quality control during additive manufacturing (3D Printing)

## Overview:

The patent focuses on a new method of 3D-Printing, where sensing fibres are embedded in the object in addition to the standard printing filaments. This method enables the determination of properties like strain or temperature distribution.



### Potential Fields of Application:

- 3D Printing

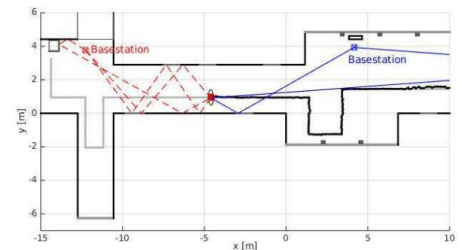
### Known Advantages

- Higher quality printed objects
- Self-sensing printed objects
- Documentation of the printing process
- Early detection of structural deficiencies

# Multipath-assisted Indoor Navigation and Tracking (MINT)

## Overview:

Indoor tracking in industrial environment poses a challenge due to the blocking of the direct signal between anchors and mobile devices by enclosing walls, furniture, machines, moving persons, etc. Therefore a large number of reflection devices would be needed. This technology minimizes the additional devices by also utilizing the deterministic reflections caused by building elements.



### Potential Fields of Application:

- Industrial mobile devices
- Home mobile devices

### Known Advantages

- Potential to reduce infrastructure by effective use of Information
- Robust achievement for centimetre-level accuracy
- Self-adaptation of the system to the environment during localization
- Provide positioning where conventional systems fail