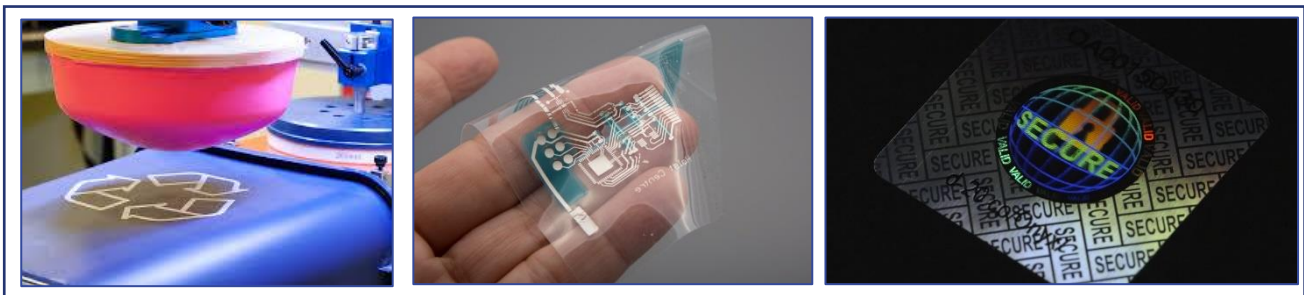


Pad Printing for Anti-Counterfeiting and Printed Electronics

Interested on contributing to innovative research project on utilizing different printing methods to develop multilevel anti-counterfeiting devices?

Background

Pad printing is a method that can imprint designs to many types of surfaces, including those with curved or irregular shapes. It can also be used to precisely apply special inks, like conductive, UV-sensitive, or thermochromic inks, which are useful for anti-counterfeiting and printed electronics. This technique makes it possible to create hidden security features like tiny text or holograms that are hard to copy. In printed electronics, pad printing can help make conductive lines, touchscreens, RFID/NFC tags, sensors, and small energy storage devices. However, the full potential of pad printing remains unexplored to date.



Research Question

Can pad printing be integrated with other printing methods to create multi-layered anti-counterfeiting features?

Your tasks:

- Set up and gain a complete understanding of the pad printing machine
- Select different inks for creating multilevel anti-counterfeiting features
- Apply security features onto different surfaces
- Develop/use a software application to decode the features
- Motivated to publish the research findings in an academic journal

Your profile:

- Studying microsystems engineering, materials science
- Enjoy performing hands-on experiments
- Highly motivated and can-do attitude
- Strong critical thinking skills

Contact:

Dr. Suman Kundu
Laboratory for the Design of Microsystems
Georges-Köhler-Allee 102, Room No. 01-217
Ph. No. +49 761 203 7508
Email : suman.kundu@imtek.uni-freiburg.de