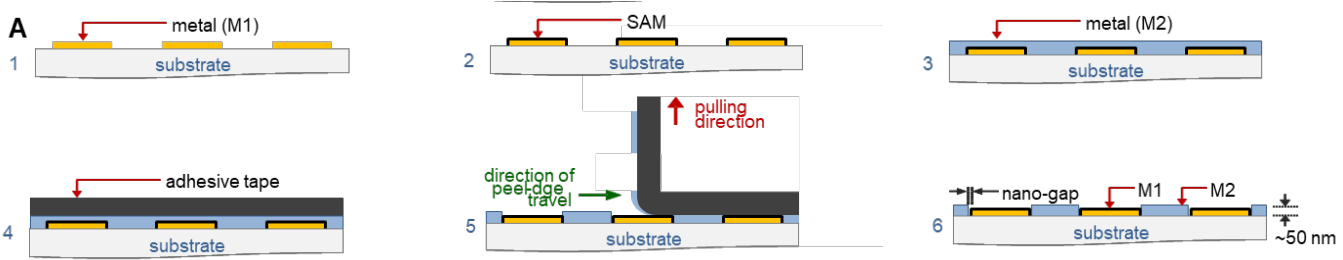


# Large-Area Nanogap Devices for high-volume RF energy harvesting

## Plastic nanoelectronics by adhesion lithography (PLANALITH)



## Adhesion Lithography

Peel-off process that can be used over large areas to create many devices in one step

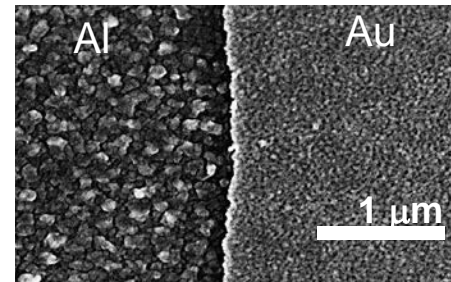
- Creates a nanogap (~10nm) between two metal areas
- No high-resolution lithography needed
- Very high aspect ratio electrodes
- Large area flexible substrates

## Device Innovation

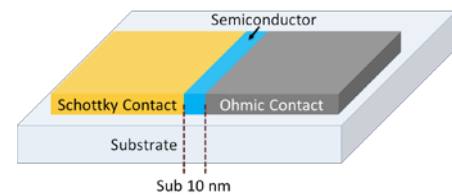
- Planar device architecture for high-speed operation
- Rectifier diodes operating in GHz regime

## Applications

- RF energy harvesting
- RFID
- High-speed OLEDs and Organic Photodetectors



Nanogap (5-20 nm)



## Benefits

- Reduced processing costs
  - Large-area parallel process makes many devices in one step
  - Lithography-free high-resolution gap definition
- Very high-speed device performance – e.g. GHz diode operation
- Reduced cost of integration

## Opportunities

- Join the project consortium as a collaborator
- Work with us to scale up the technology
- Help us to determine the most appropriate applications

