Flexible Electronics for Sensors and Actuators

Flexible - light - ultrathin: Foil-based electronics for demanding applications

Multilayer circuits
- Single layer thickness: 1 - 20 µm
- Layer-to-layer overlay: < 2 µm

Substrate material
- Polyimide, parylene, SU-8
- Planar arrays, linear probes, mesh electronics

Conductive material
- Gold, Ti, Pt, ITO, graphene

Microelectrodes for sensing
- Gold, Pt, Ir, TiN, IrOx, Ag/AgCl, CNT, graphene, PEDOT:PSS
- 2D and 3D geometries

Electrical contacting
- Soldering and wire bonding

Application-specific customization
- Encapsulation with barrier and insulation layers (glass, parylene)
- Biocompatible materials
- Chip-in-foil

Development and production
- Customer- and application-specific designs
- Manufacturing of small batches with fast delivery

Applications
- Biosensors
- Medical technology
- Neural implants

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