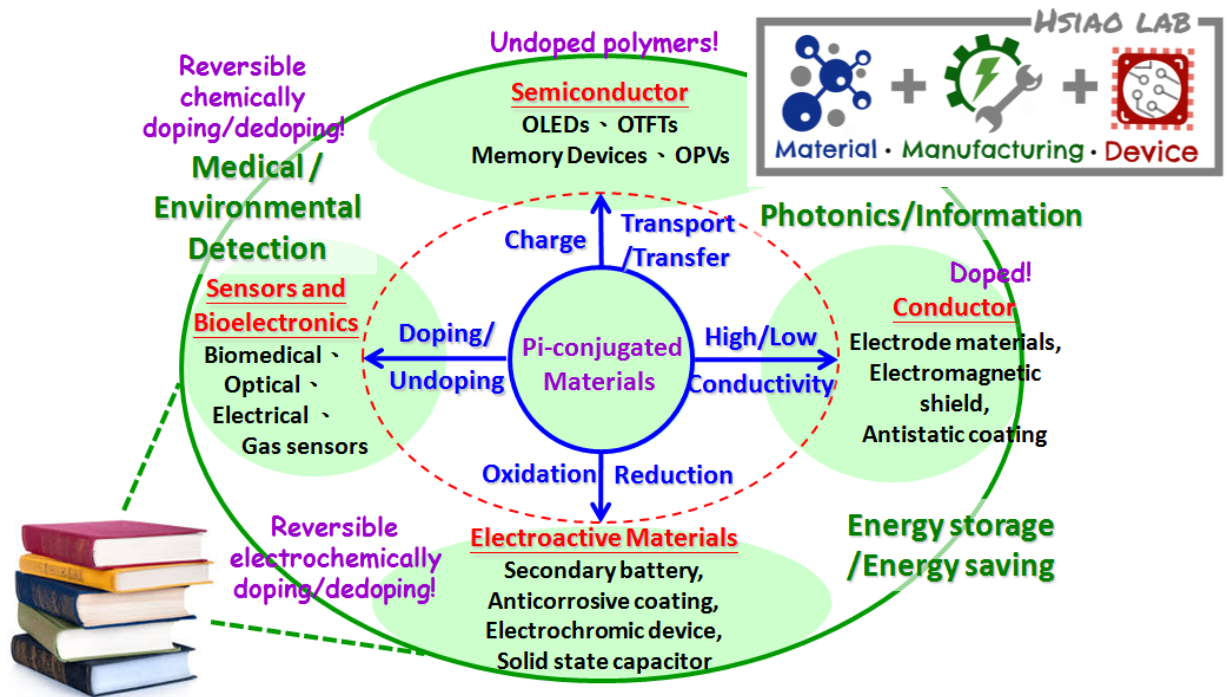


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1. Pi-conjugated materials (conducting polymers, nanocarbon materials, and semiconducting small molecules):

- Pi-conjugated material synthesis
- Polymer processing
- Polymer composite
- Semiconductor manufacturing process
- Self-assembly process
- Nanoimprint lithography
- Freeze drying
- Electrospinning & electrospray processes
- Spray drying & spray coating process
- Laser scribing process

2. Organic bioelectronic technologies & applications:

- Bioelectronic interfaces
- Tissue engineering (neurons, stem cells, and myocardial cells)
- Rare cell isolation and detection [circulating tumor cell (CTC), and circulating trophoblasts (cTB)]

- Kidney treatment and detection [hemodialysis (HD), and hemoperfusion (HP)]
- Cell-based sensing technologies [electric cell-substrate impedance sensing (ECIS), microelectrode arrays (MEAs), and organic electrochemical transistors (OECTs)]
- Microfluidic technologies (PDMS, and PMMA systems)
- Drug controlled release

3. Functional interfaces for green energy, environmental protection, and optoelectronic applications:

- Flexible printed circuit board (FPCB)
- Organic photovoltaics (OPVs)
- Supercapacitors (SCs)
- Thermoelectric generators (TEGs)
- Li-ion batteries
- Field emitters (FEs)
- Electrochromic devices (ECDs)
- Oil/water separation
- Plasmonic photon management
- Thermal management
- Photocatalytic applications
- Flexible electronics
- Stretchable electronics
- Self-healing electronics
- Hydrogel electronics