

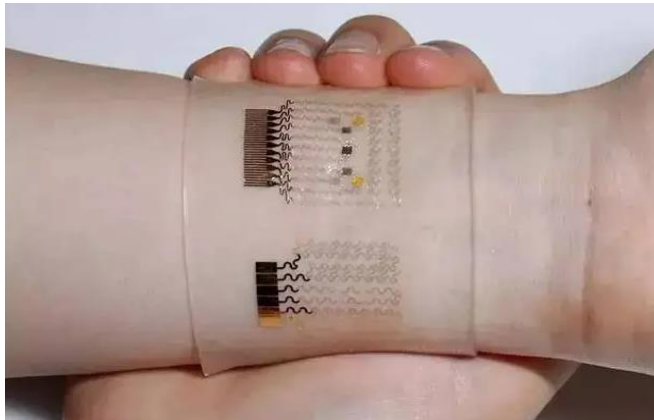
Big Problem_ Limitation of flexible electronics---Cost



◆ **Flexible electronics**: an emerging electronic technology that fabricates organic/inorganic material and electronic devices on flexible/ductile substrates.



Flexible materials are expensive



A small piece of electronic skin will cost thousands of HKD

Large area packaging is difficult



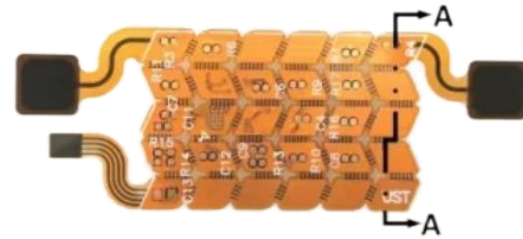
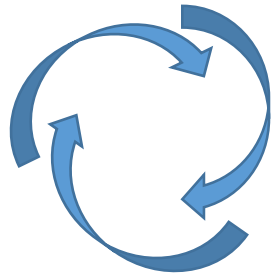
Current flexible sensors are only limited to small area sensing

Solution _ Low cost large area intelligent sensing system

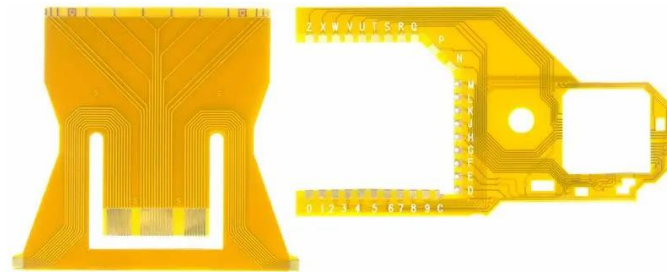
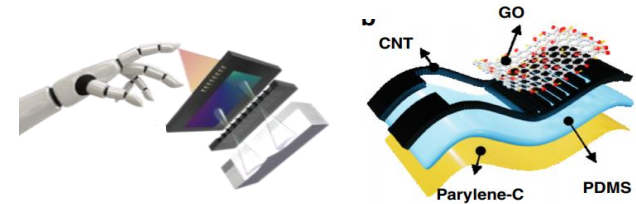
Kirigami design method

High accuracy flexible sensor

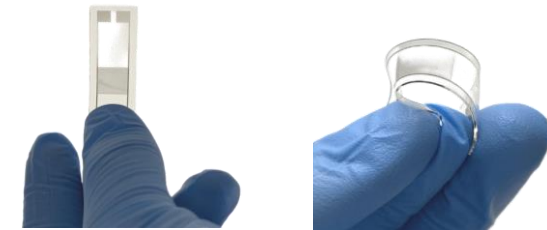
AI Algorithm



Expandable Structure



Industrial fabrication technology



Wide range of flexible sensors

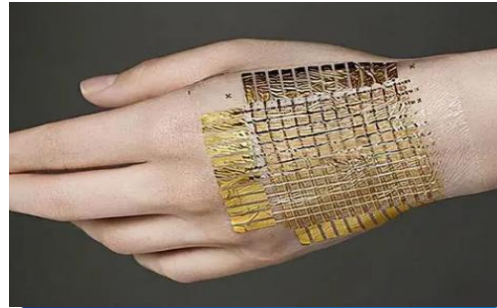
Saving 40% fabrication costs

Compatible with human body

Future Application Scenarios



Thinner and softer display



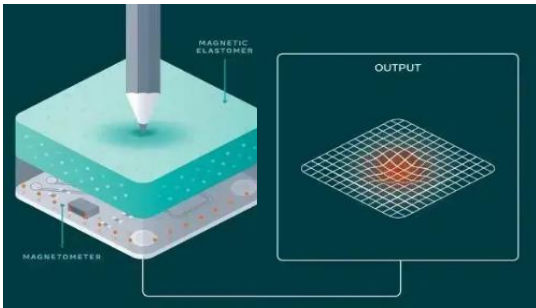
Sensitive and accurate pressure sensing



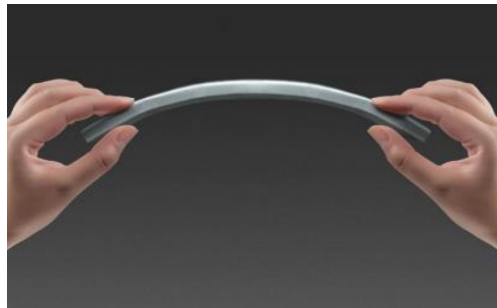
Body monitoring training clothing



Smart Running Shoes



Larger area collision sensing



Higher capacity flexible battery



Motion detection insoles



Smart Hats

Electronic Products

Smart clothes

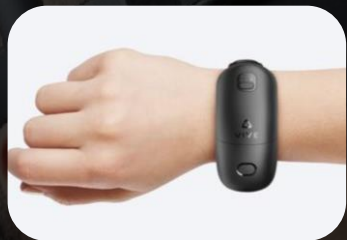
Application_Metacosmic interactions are constrained by hand devices

- The hand is the most active organ in the body
- But is severely limited in today's interactive reality



- Current hand devices are gamepads with poor experience

Application_Analysis of existing hand device



● HTC Wrist tracking



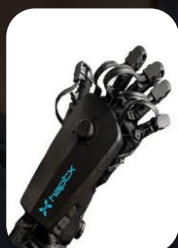
● Meta VR headset tracking



1. Tracking blind spots
2. No hand feedback

Greater challenges to VR gloves:

- High precision
- Full flexible contact
- Feedback ability
- Flexible battery



● Textile fabrics+Rigid device



3. Uncomfortable to wear
(Rigid sensor+ Rigid battery)

Ori-glove1.3



VR glove (flexible sensing+flexible battery)

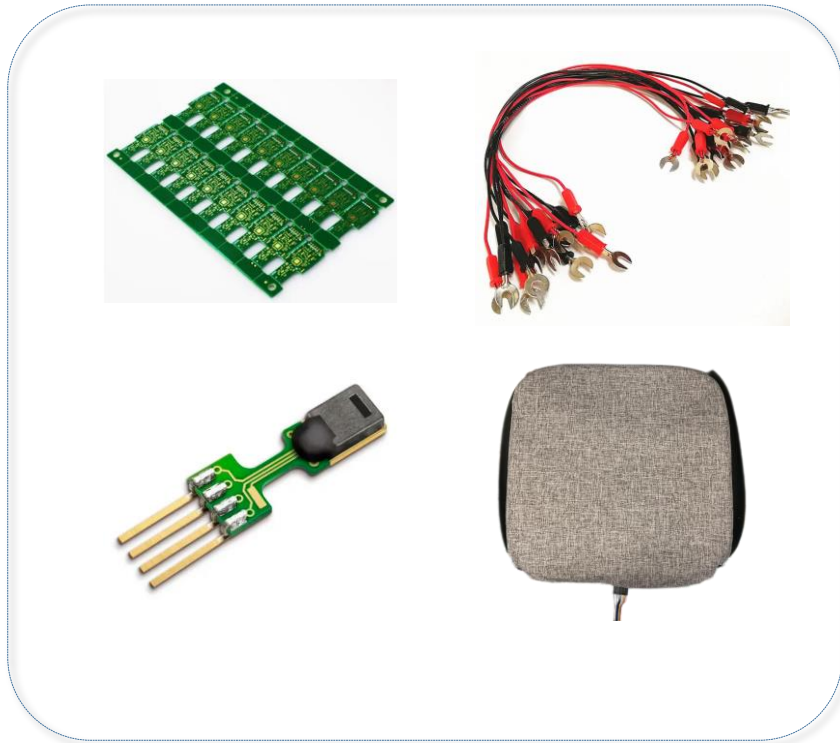
Full flexible: The paper folding technology is used to integrate flexible body, high-performance sensor and circuit chip.

High precision: Multi-dimensional data fusion, automatic correction algorithm

Strong expand ability: Can integrate tactile, temperature sensing and flexible feedback

- Weight: 50g;
- Sensor: One hand 22 1mm stress sensors+6 gyroscope sensors;
- Dynamic range: Course, roll, pitch 360° full Angle, $\pm 0.5^\circ$
- Power: Flexible battery, Type-C charge, 20 hours of using
- Communication: Bluetooth and WIFI are supported
- Signal delay: $\leq 5\text{ms}$

Existing smart cushion



Assembly of circuit boards, wires, sensors
point sensing



Reduce costs by 60%
Fully-flexible experience

Our smart cushion



All-in-one flexible printing
area sensing



Prof. Hongyu YU Chief Scientist

- ✓ Professor in MAE, HKUST
- ✓ Published 100+ papers and several international patents
- ✓ BS and MS from Tsinghua University, PhD from the University of Southern California
- ✓ Working on flexible electronics for 20 years, leading research projects from Hong Kong government, National Science Foundation, NASA and Intel Corporation.



Dr. Chili WU CEO

- PhD from MAE, HKUST
- Rich experience in industrial application research
- Responsible for operation and strategic planning of the company



Ruoqin WAN CTO

- PhD Candidate in MAE, HKUST
- Years of engineering experience, now researching on large area flexible electronic system
- Responsible for company R&D planning and management



Dr. Xiaoyi WANG

- Professor in Beijing Institute of Technology
- Responsible for MEMS process design and integrated system planning



Mr. Yang LI

- Msc, HKUST
- Expert in flexible and stretchable electronics system
- Responsible for cutting-edge sensor development



Junsheng ZHANG

- 10 years experience in circuit design, extensive experience in startups, developed several electronic products
- Responsible for the development of the integrated systems