



nepes

2022 纳沛斯集团简介

nepes

Semiconductor

Artificial Intelligence

IT Materials



关于纳沛斯



事业领域



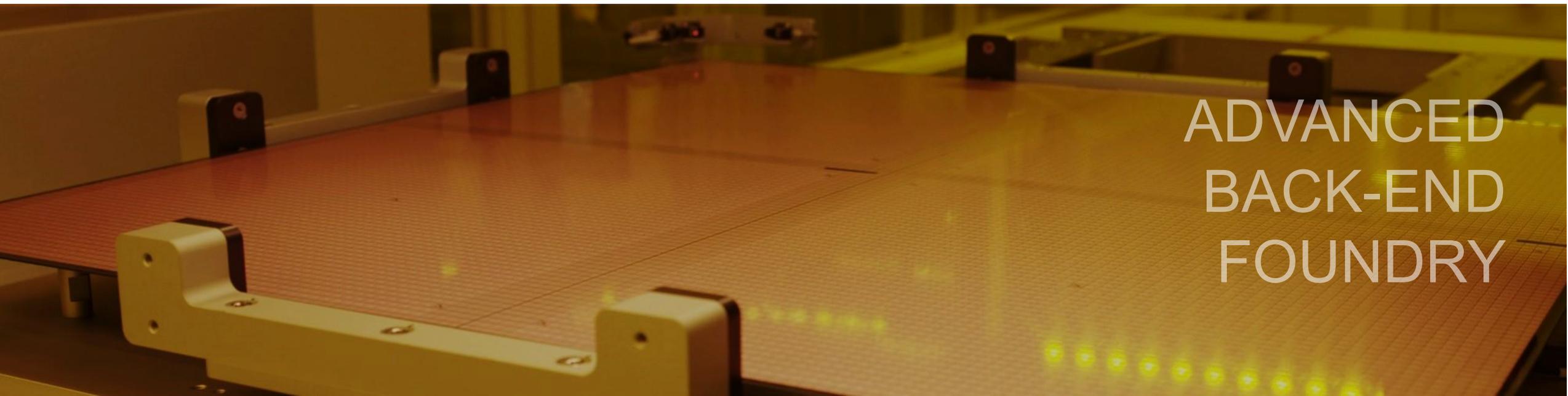
核心技术



国际化纳沛斯



企业文化



ADVANCED
BACK-END
FOUNDRY



纳沛斯在决定公司名称的那一刻就开始了4D管理



词源(希伯来语)

נֶפֶשׁ(nepesh)

永恒的生命 / 精力充沛

长寿企业



什么是 4D (4th dimension) 管理?

为了让公司能成为有丰盛收获的长寿企业，
使**创造、创新、创拓**事宜和**有趣、满足、快乐**事宜
不断发生的经营管理。

Corporate Identity



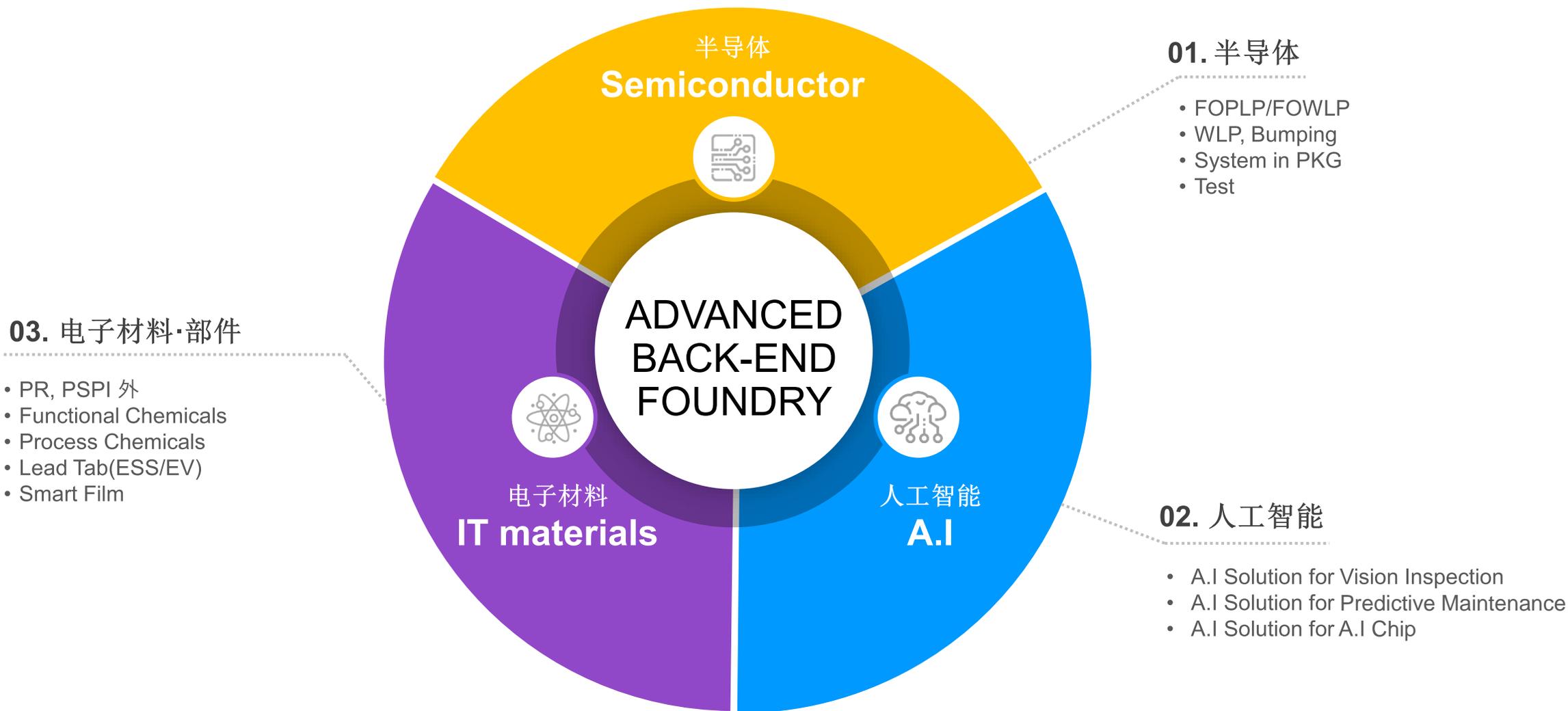
Trademark



公 司 名	株式会社 纳沛斯
公司成立日	1990年 12月
公司上市日	1999年 12月(KOSDAQ 033640)
集团董事长	李柄九 (Byung-Koo Lee) 先生
海外法人	中国、美国、菲律宾、印尼



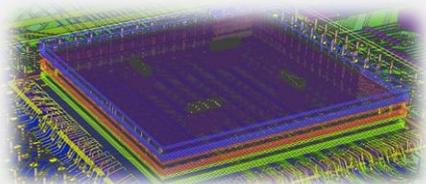
nipes是先进后端晶圆代工(Advanced Back-end Foundry)专业化企业, 将在拉动系统半导体产业的未来发展



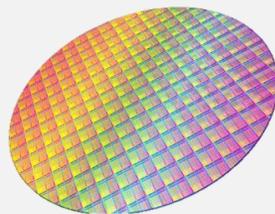


nepes通过FOPLP、nSiP 等尖端半导体技术正在更换国际供应链的地形

半导体供应链



IC 设计



硅制造



封装 (WLP¹ / PLP²)



测试制程

IDM

OSATS

Fabless
设计公司

Wafer Foundry
晶圆代工厂

Bumping, RDL³ Processing

Back-end Foundry (后端晶圆代工)



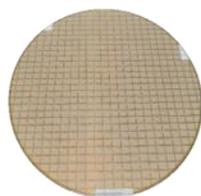
- ¹ Wafer Level Package / 晶圆级封装
- ² Panel Level Package / 板级封装
- ³ Re-Distribution Layer / 阶层再分配

※ 2020年 指定为韩国国家核心技术



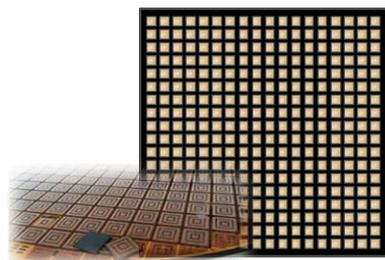
nepes的End-fab技术是将高性能半导体制成轻薄短小化的核心技术

Fan in WLP



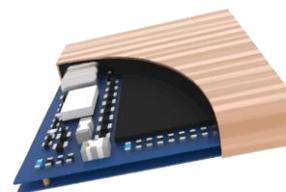
200mm / 300mm

Fan out WLP/PLP



300mm rd. / 600mm sq.

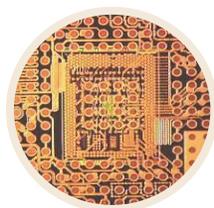
nSiP



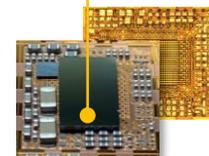
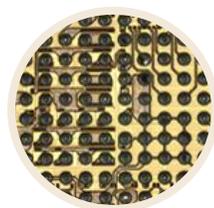
Small & Thin SiP(End fab+PLP)



0.4 mm



0.9 mm

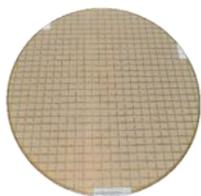


应用产品

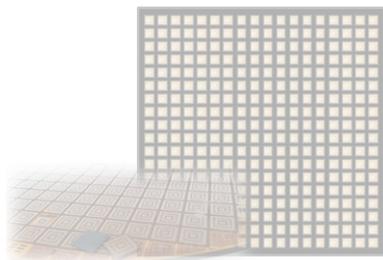




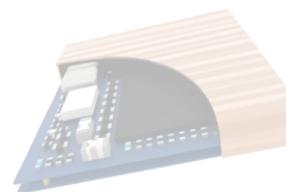
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200mm / 300mm

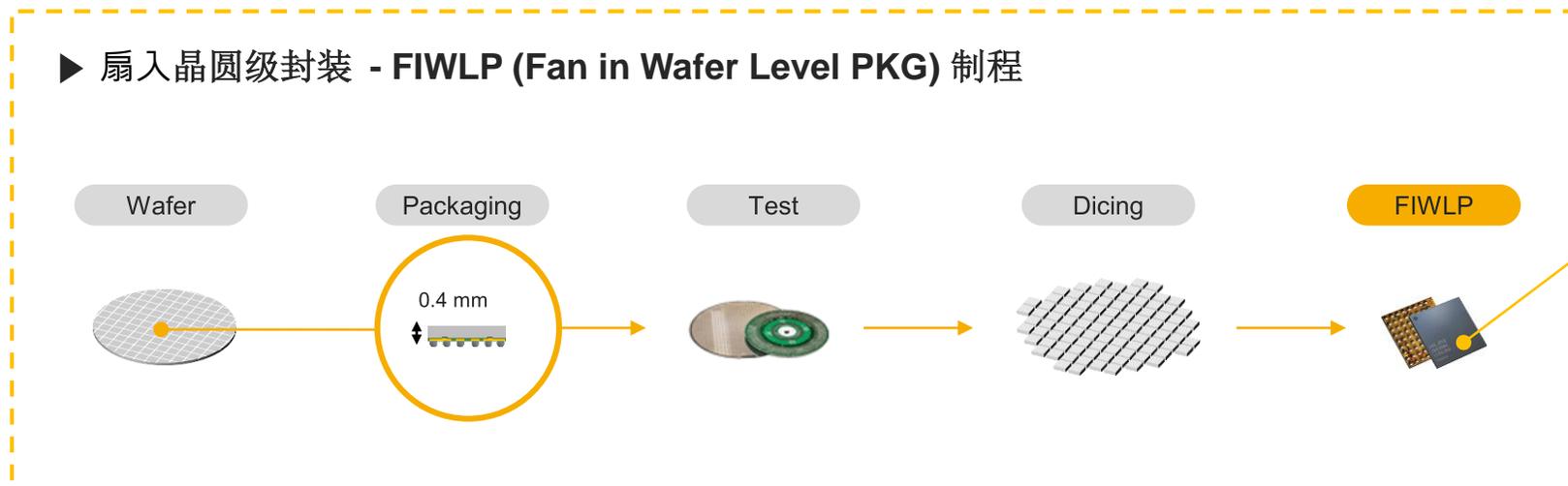


300mm rd. / 600mm sq.



Small & Thin SiP(End fab+PLP)

▶ 扇入晶圆级封装 - FIWLP (Fan in Wafer Level PKG) 制程



应用产品

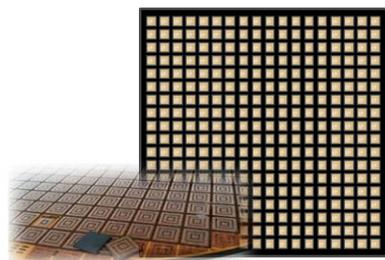




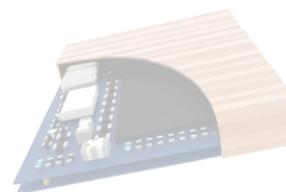
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200mm / 300mm

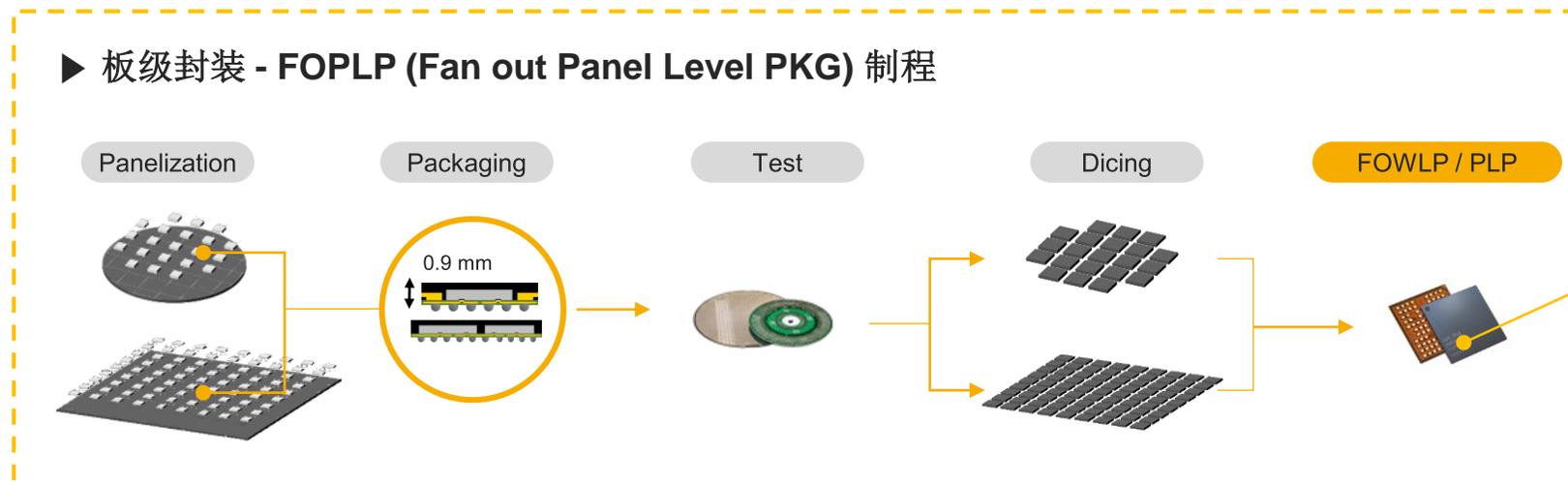


300mm rd. / 600mm sq.



Small & Thin SiP(End fab+PLP)

▶ 板级封装 - FOPLP (Fan out Panel Level PKG) 制程



应用产品

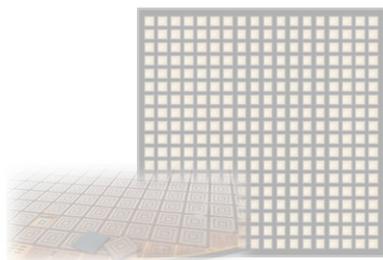




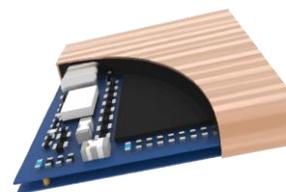
nepes的End-fab技术是将高性能半导体制成轻薄短小化的核心技术



200mm / 300mm

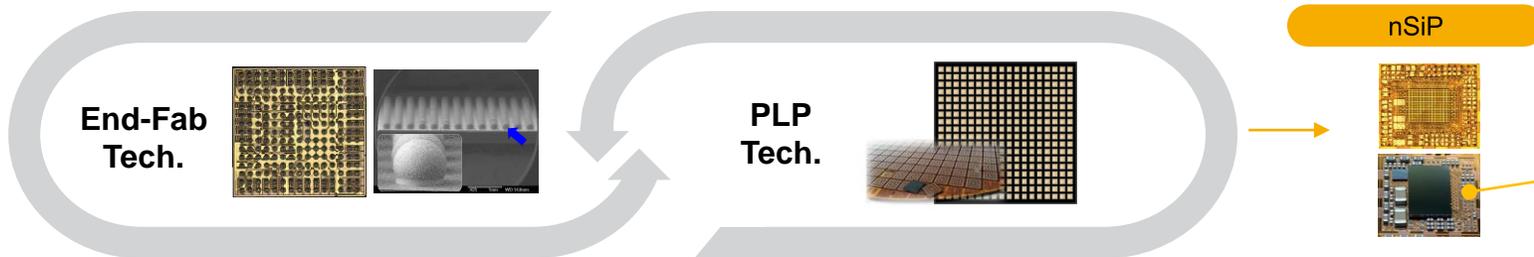


300mm rd. / 600mm sq.



Small & Thin SiP(End fab+PLP)

▶ 什么叫 nSiP(System in PKG)?



应用产品





预测维护

AI芯片

过程自动化

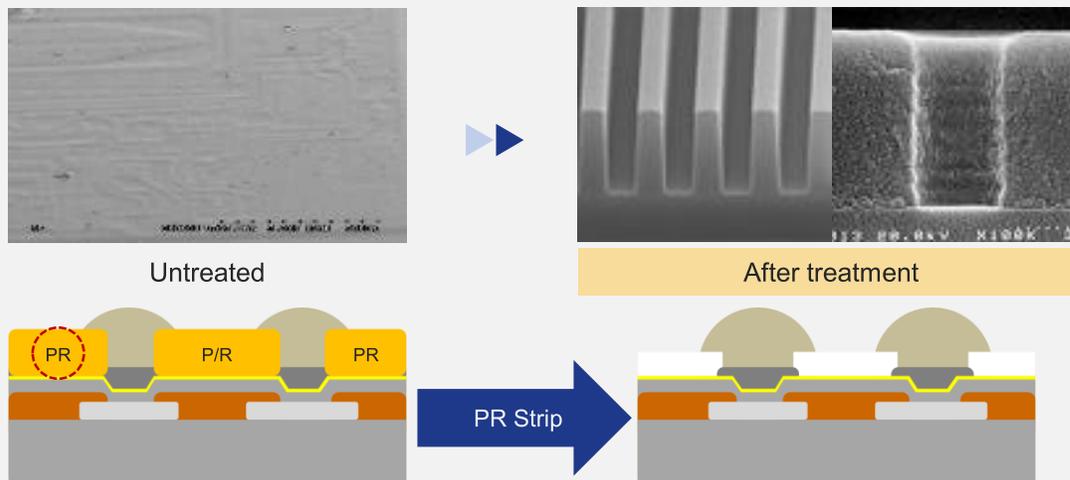
视觉检查

产品及服务

- 视觉检查AI解决方案
- 预测维护AI解决方案
- AI芯片解决方案

工艺化学制品

- PR
- Developer
- Stripper
- Etchant
- HSN

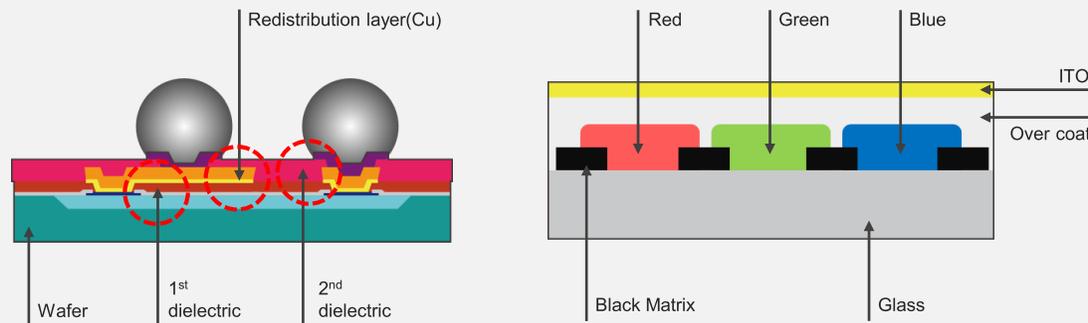


应用产品

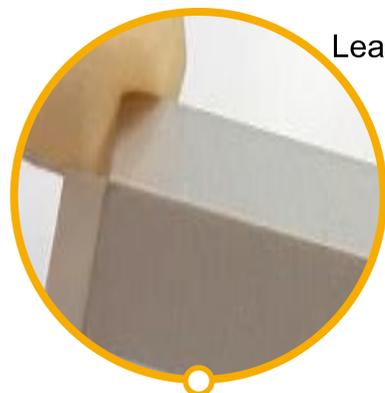


功能性化学制品

- ILD/PSPI
- Cu Plating
- Color paste



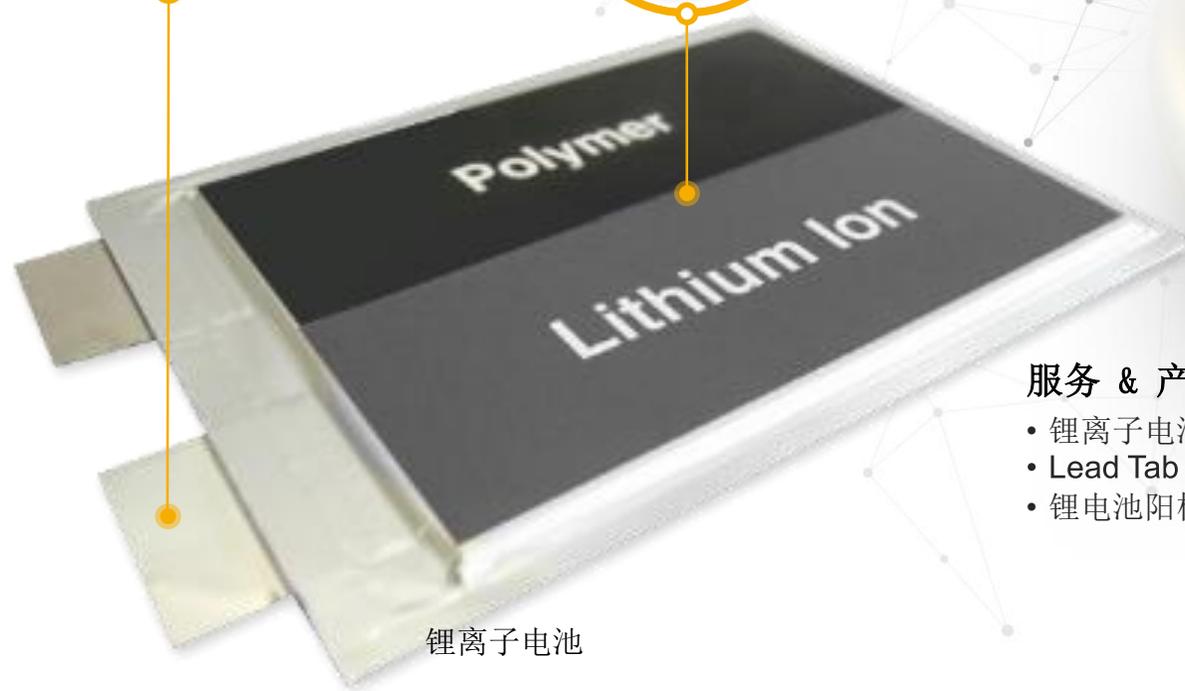
半导体
显示屏 (LCD, OLED)
太阳能电池



Lead Tab



锂电池阳极



锂离子电池

服务 & 产品

- 锂离子电池
- Lead Tab
- 锂电池阳极电极

应用范围





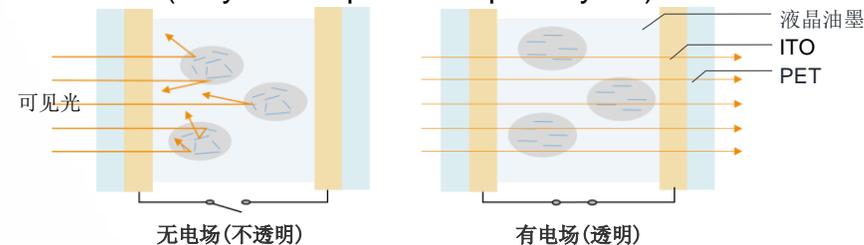
变色膜 (Super LC)



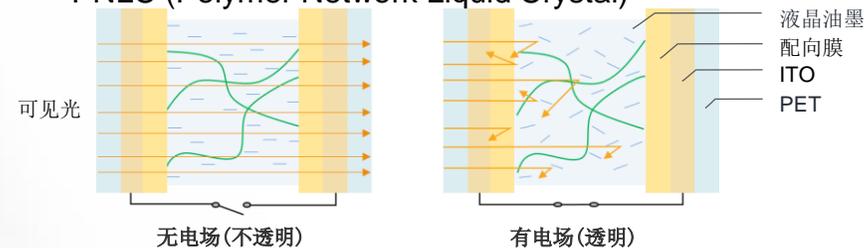
采用于广告的事例

Super LC的结构及原理

• PDLC (Polymer Dispersed Liquid Crystal)

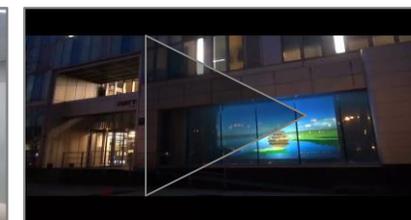


• PNLC (Polymer Network Liquid Crystal)



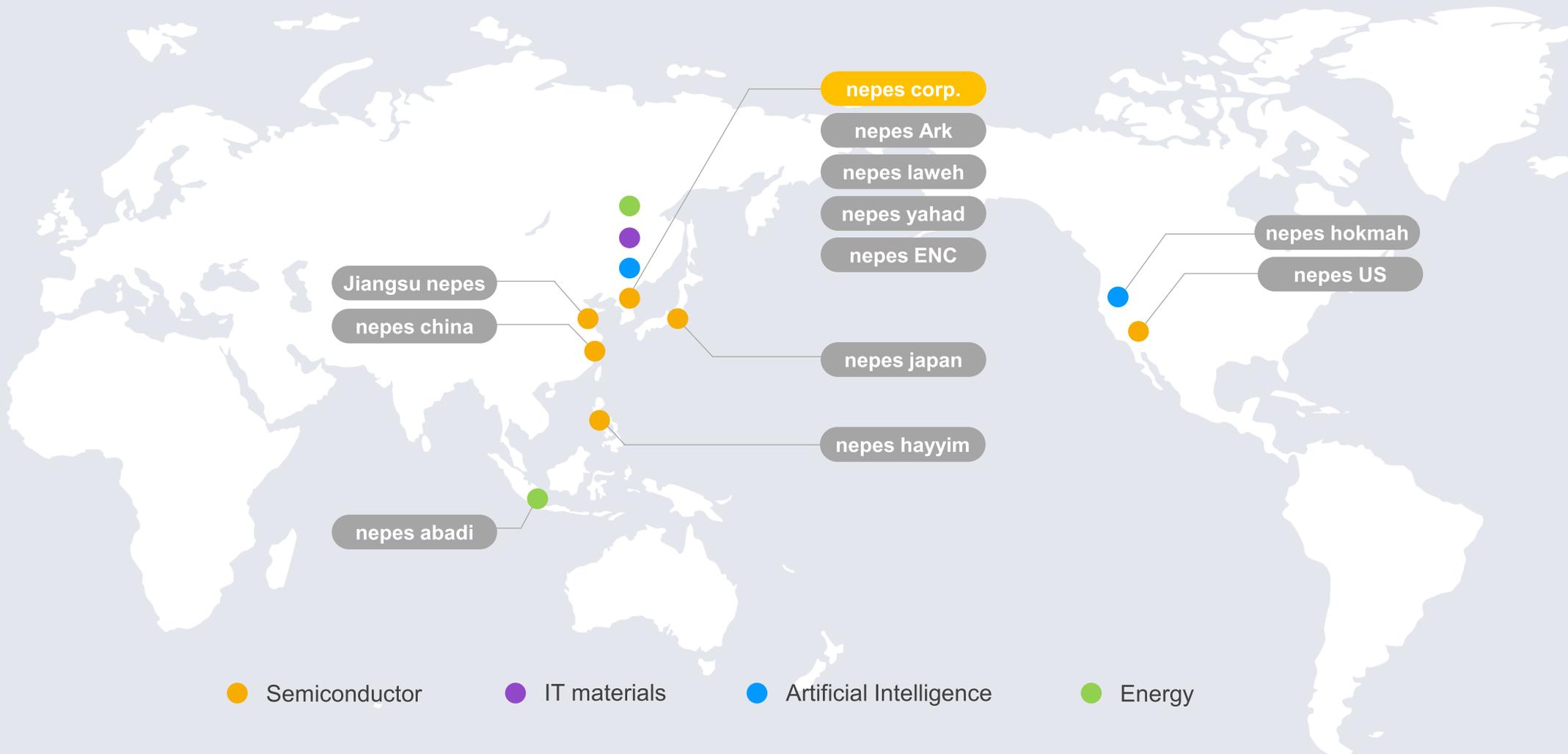
服务 & 产品

- Building & Interior
- Signage & Electronics





将我们的技术和产品服务于**世界各地**。





企业文化

纳沛斯以企业文化为基础创造业绩来持续成长



Global
NO.1
企业文化



3.3.7 LIFE



nepes
nepes corporation

感谢！

To Him who alone does great wonders, His love endures forever. Psalm 136:4

* A dandelion means 'Gratitude' in the language of flowers

nepes corporation

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白宫报告引述里的认定

通过拜登总统的行政命令，白宫在 2021年6月发布半导体供应链调查报告书；

- 报告书里强调尖端封装对于国家保安的重要性，并且建议了加强国内半导体制造生态体系，同时照明了国际前十尖端封装企业之一的nepes。

BUILDING RESILIENT SUPPLY CHAINS, REVITALIZING AMERICAN MANUFACTURING, AND FOSTERING BROAD-BASED GROWTH

100-Day Reviews under Executive Order 14017

June 2021

A Report by
The White House

Including Reviews by
Department of Commerce
Department of Energy
Department of Defense
Department of Health and Human Services

THE WHITE HOUSE
WASHINGTON

Advanced Packaging: Current Resilience [43p.]

The top 10 advanced packaging companies include: two IDMs (Intel (U.S.) and Samsung (South Korea)); a foundry (TSMC (Taiwan)); the top five global OSATs (ASE Group (Taiwan), SPII (Taiwan), Amkor (U.S.), Powertech Technology (Taiwan), and JCET (China)) and two smaller OSATs: **Nepes (South Korea)** and Chipbond (Taiwan)). These 10 companies process approximately three-fourths of all advanced packaged chips.⁹²

[Source: The White House, 'Building Resilient Supply Chains, Revitalizing American Manufacturing, and Fostering Broad-based Growth', Jun '21]

通过加入ASIC获得认定

通过IBM的招请2022年5月加入了美国半导体创新联盟-ASIC (American Semiconductor Innovation Coalition)

- IBM及会员企业高度期待nepes的WLP和FOPLP等尖端封装的专业知识，会给联盟提供巨大的价值。



www.asicoalition.org

Coalition Members Include



nepes独特的经营哲学认定为能使组织持续成长的创新竞争力，已多次在各种国际学术会议上以案例介绍。

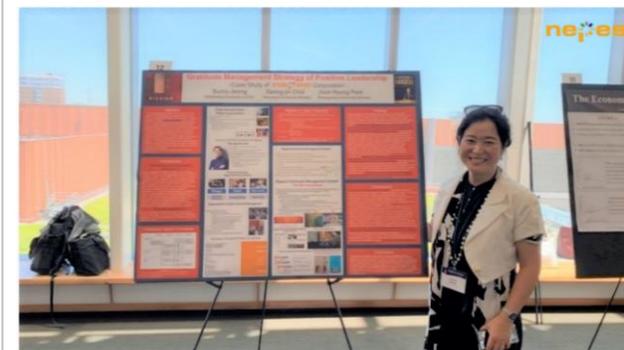
2022 GLOBAL CONFERENCE ON IHRM

SAVE THE DATE! MAY 19-21, 2022

FIFTH GLOBAL CONFERENCE ON INTERNATIONAL HUMAN RESOURCE MANAGEMENT



CIHRS
Center for International
Human Resource Studies



Professor Sunny Jeong (Wittenberg University) presented the case of nepes corporation.

Presented by:
 MICHIGAN ROSS
CENTER FOR POSITIVE ORGANIZATIONS

1) 2022.5.19-21 @ St.John's 大学
国际人事经营国际会议

2) 2022.6.23-24 @ Michigan 大学
美国肯定组织学研究会议

市场趋势

小型规格
(基于晶圆级平台)

高集成度晶圆级系统封装

技术路标规划

Conventional PKG

QFP
QFN
FCBGA

Bumping

Gold Solder

Etc(Cu Pillar, CNA bumping)

WLP

8"WLP 12"WLP

Chip 0.4mm

Fan-out WLP/PLP

nPLP™
600x600mm

Chip 0.9mm

System in PKG

Multi-Chip Packaging

System in packaging

One Package Module

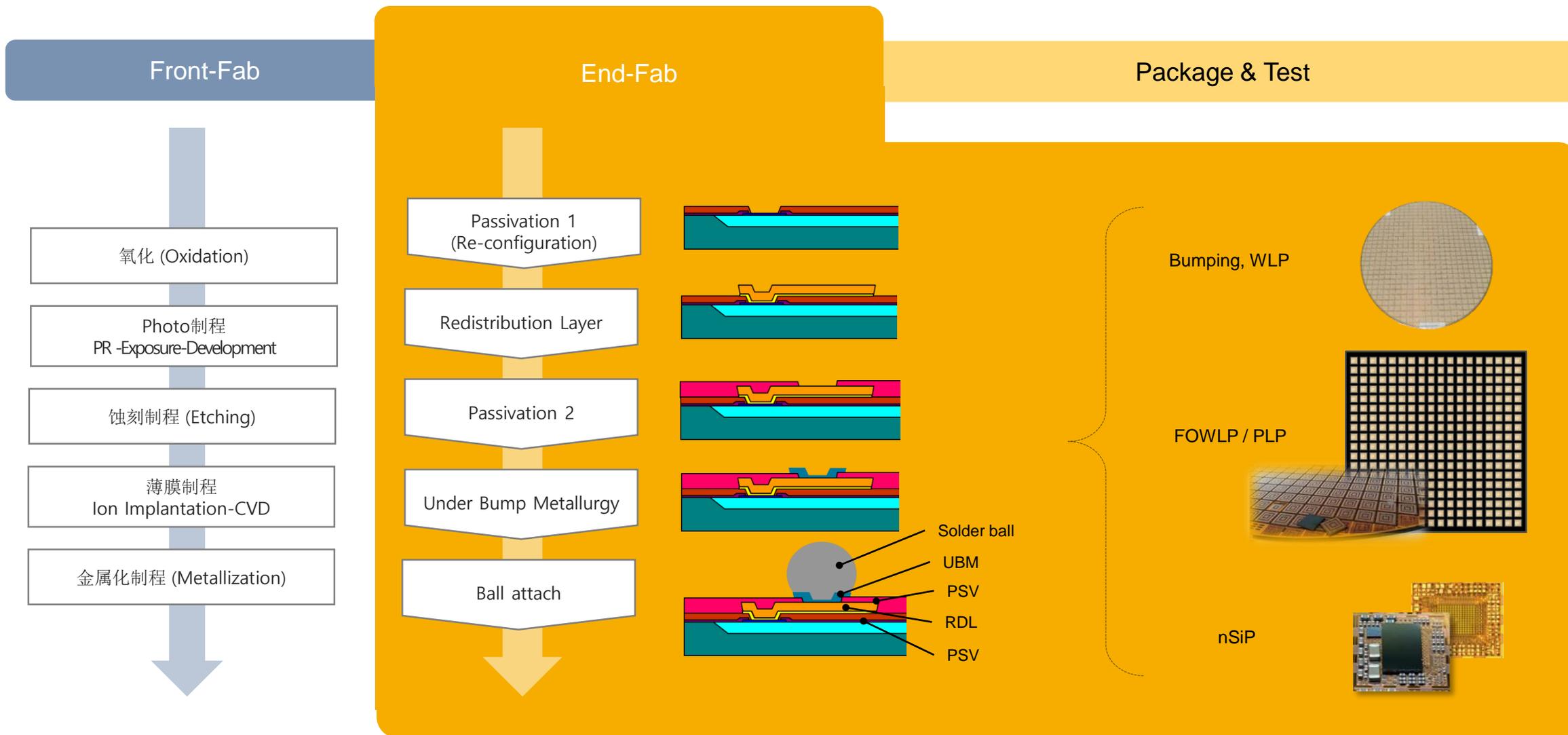
- AP, PMIC
- Flash Memory
- Neuromorphic

定位

Other OSAT
Conventional wire bonding packaging & Typical WLP technology

nepes 后端晶圆代工
(Bump, WLP, FOWLP, FOPLP, nSiP, TEST)

是指Front-Fab 工程后，钝化、RDL制程及Bump制程



- nepes的FOPLP为行业内最大Panel尺寸是单板级的标准
- 通过FOWLP的经验和内部化，以End-Fab技术为基础确保了独有的FOPLP技术

