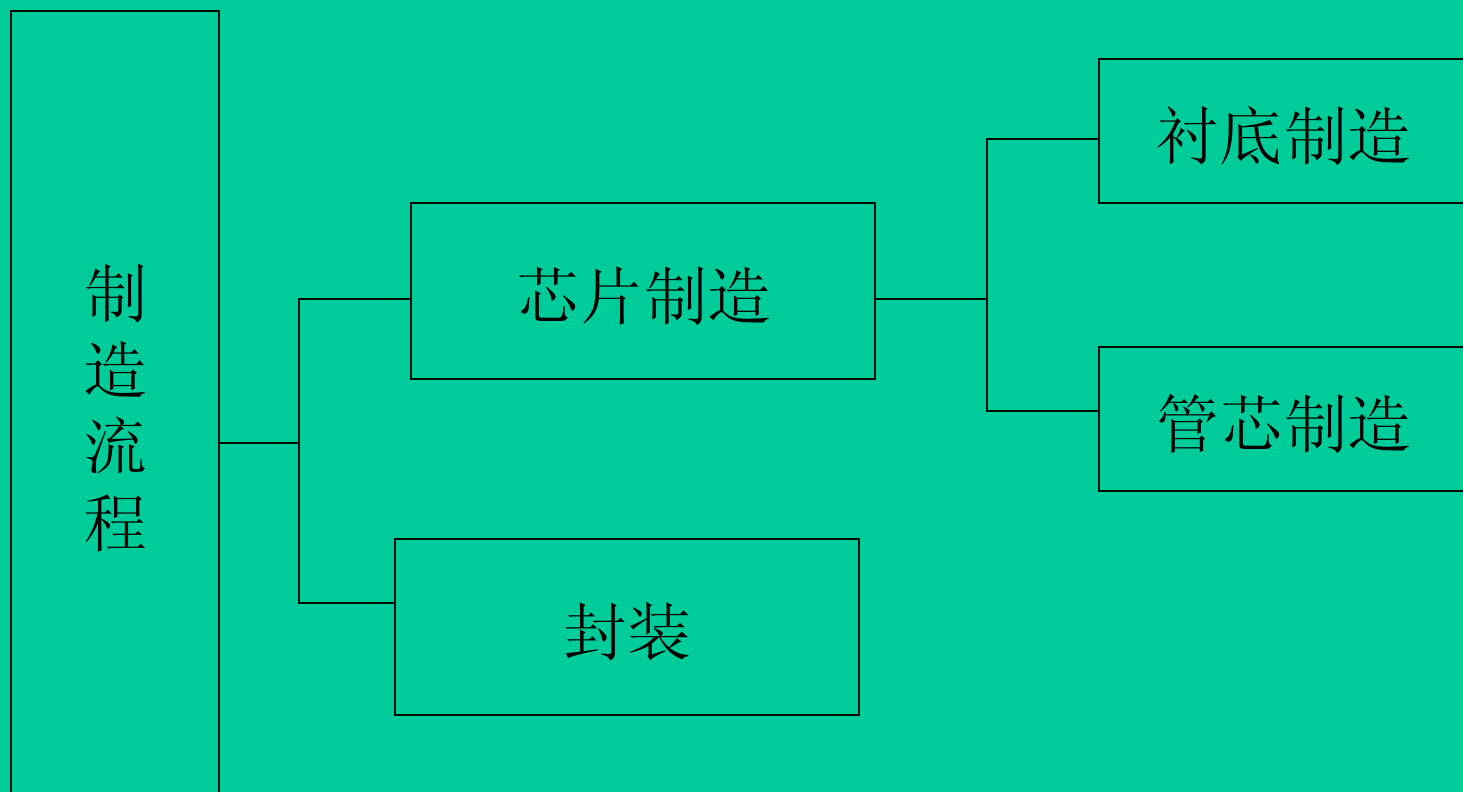
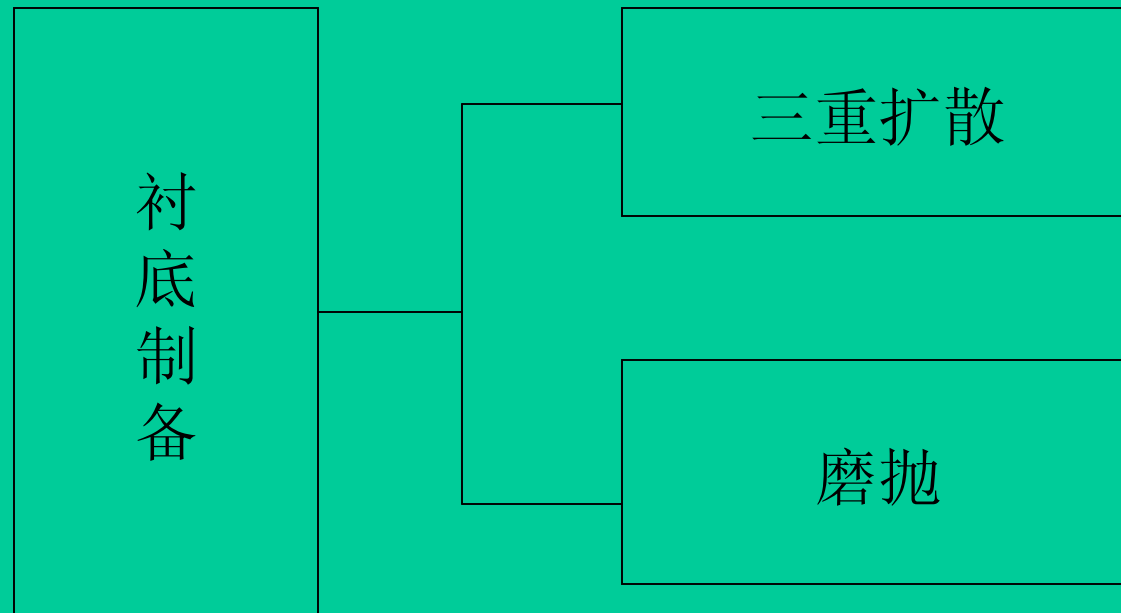


双极晶体管制造工艺流程

（以NPN管为例）







三重扩散

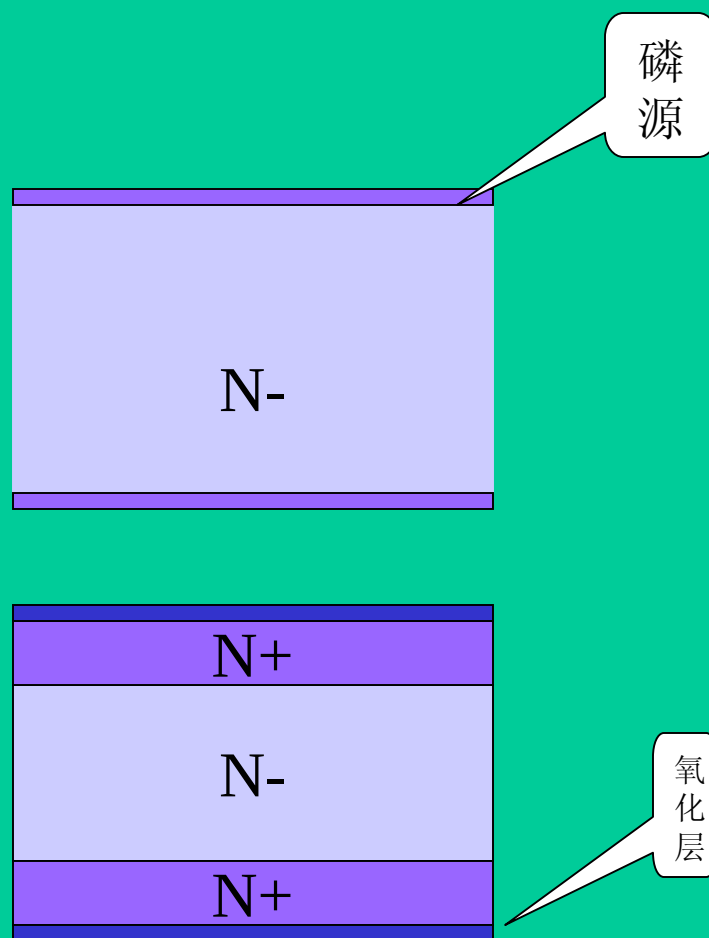
N+予扩



N+主扩



N+氧化

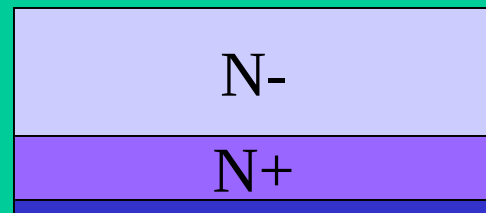
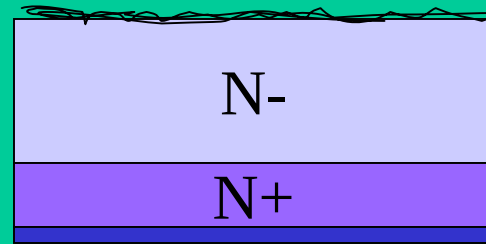


磨抛

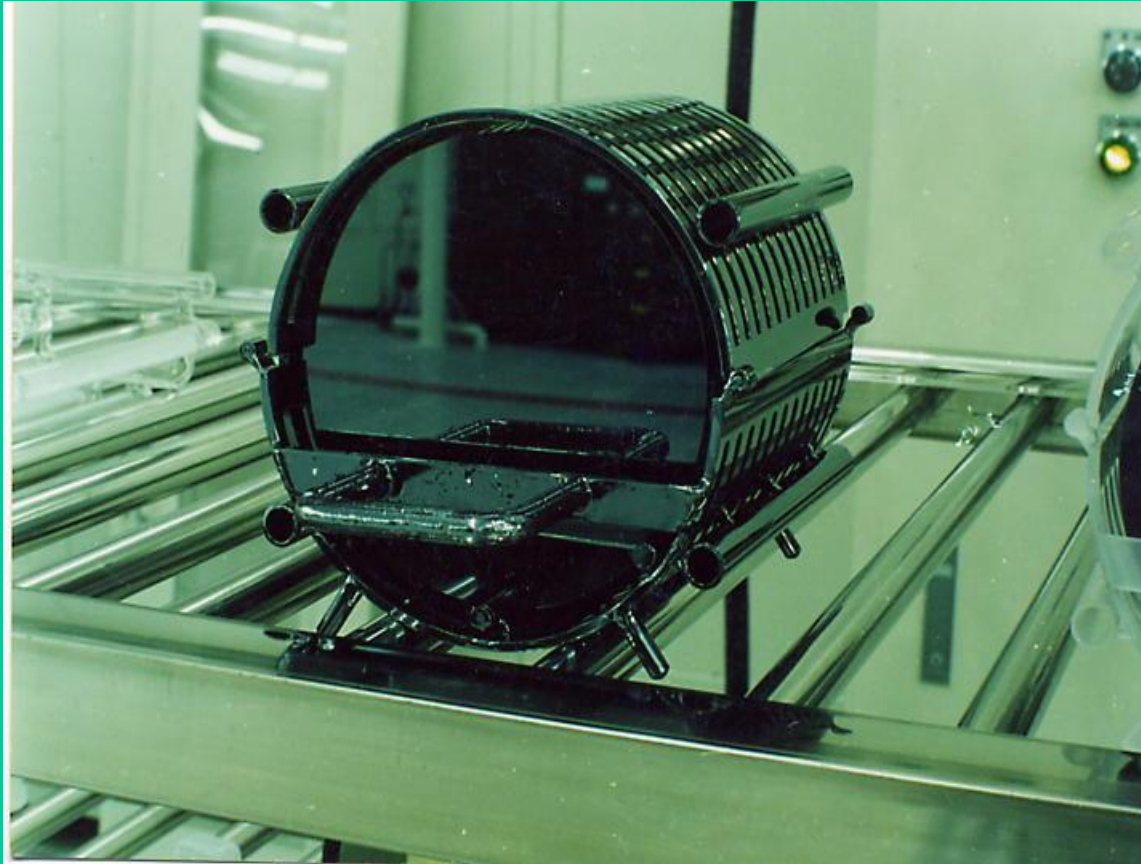
磨片



抛光



衬底制备结束后照片



管芯制造:

基区制造

发射区制造

终端保护

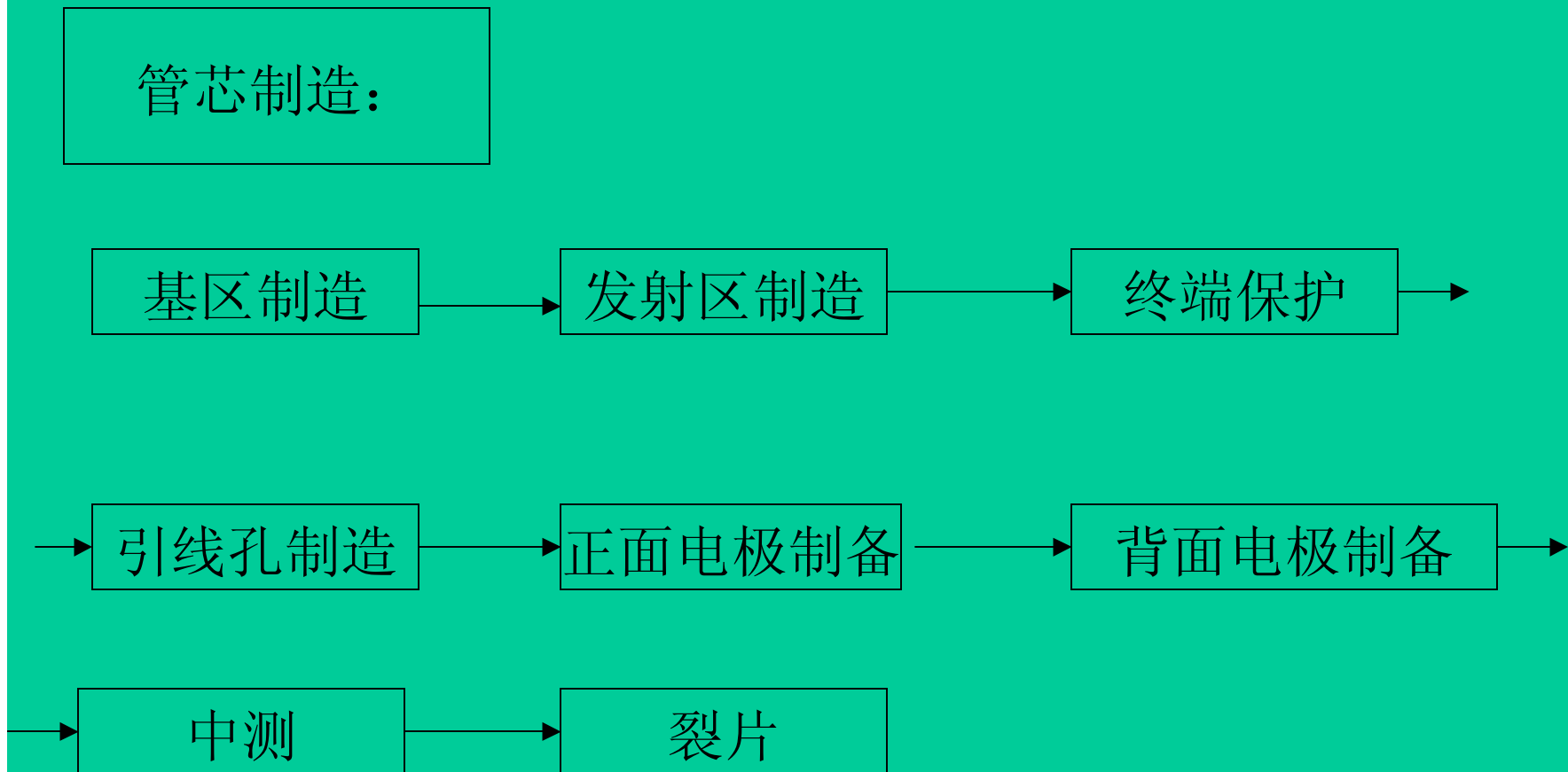
引线孔制造

正面电极制备

背面电极制备

中测

裂片

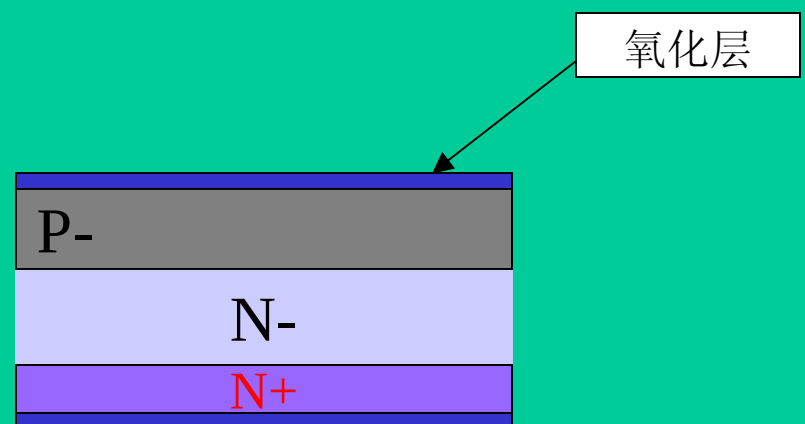
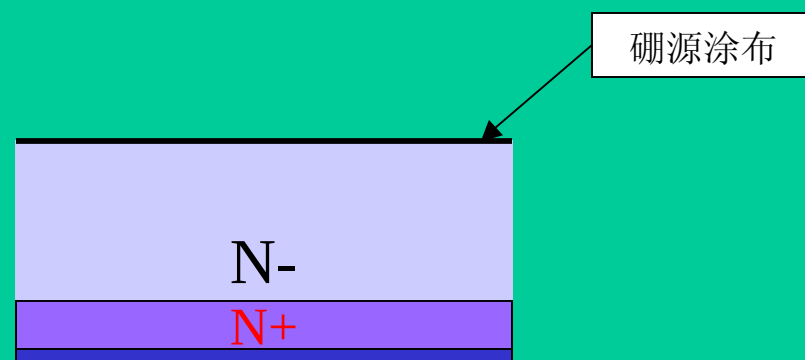


基区制造

硼预扩

硼氧化

硼主扩

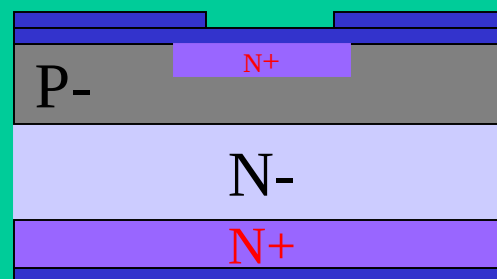
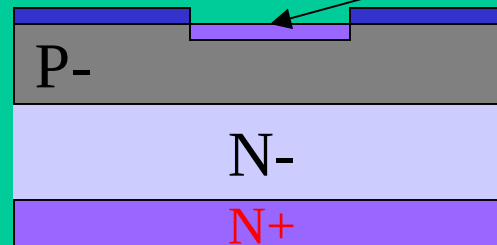


发射区制造:

磷预扩

磷主扩

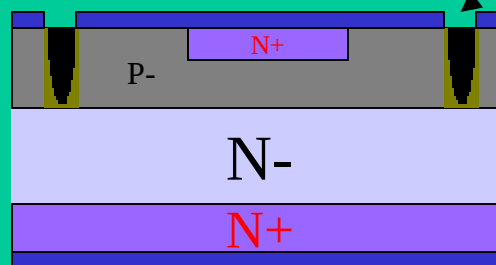
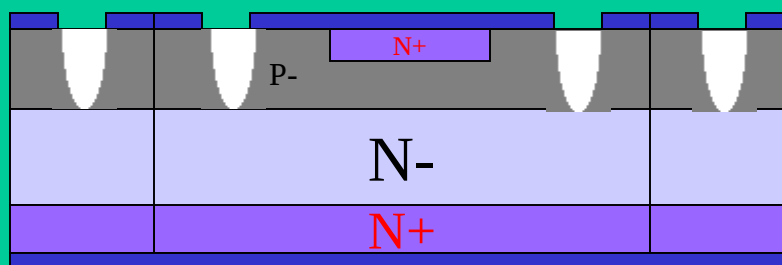
磷源



终端保护:

台面腐蚀

玻璃电泳



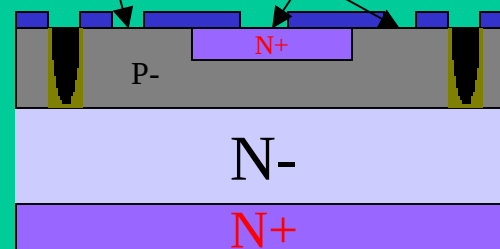
玻璃粉

引线孔制造：

引线孔光刻

基区引线孔

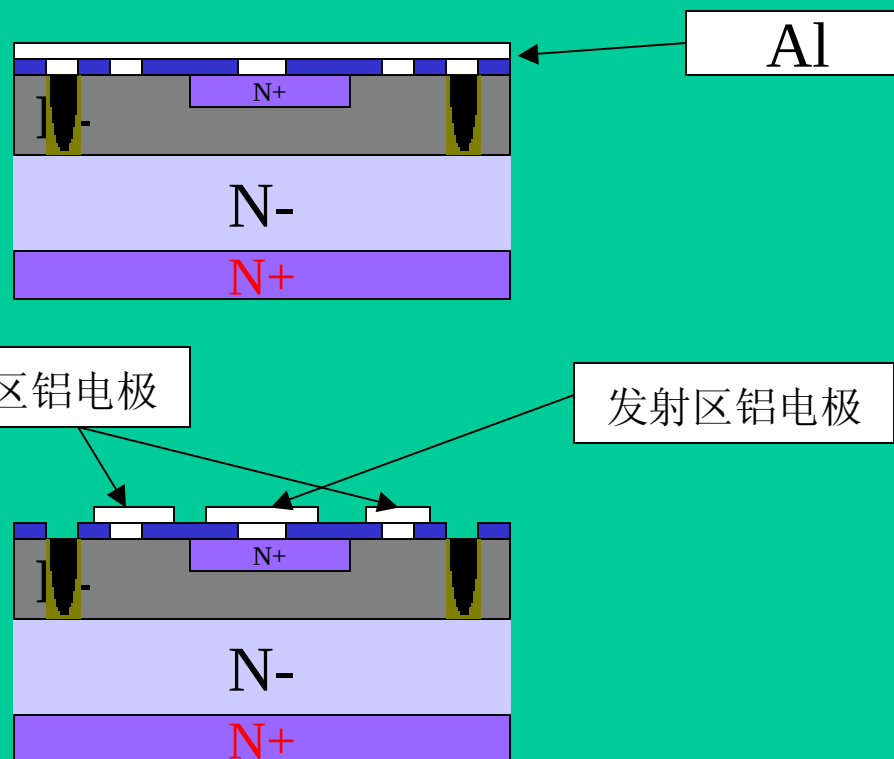
发射区引线孔



正面电极制备:

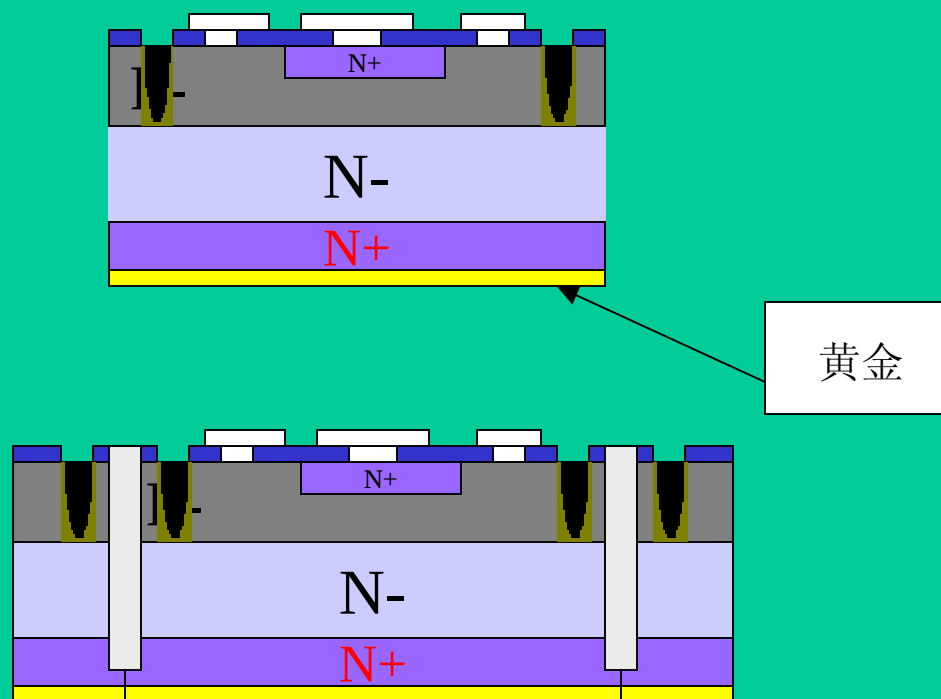
正面蒸铝

光刻铝、铝合金



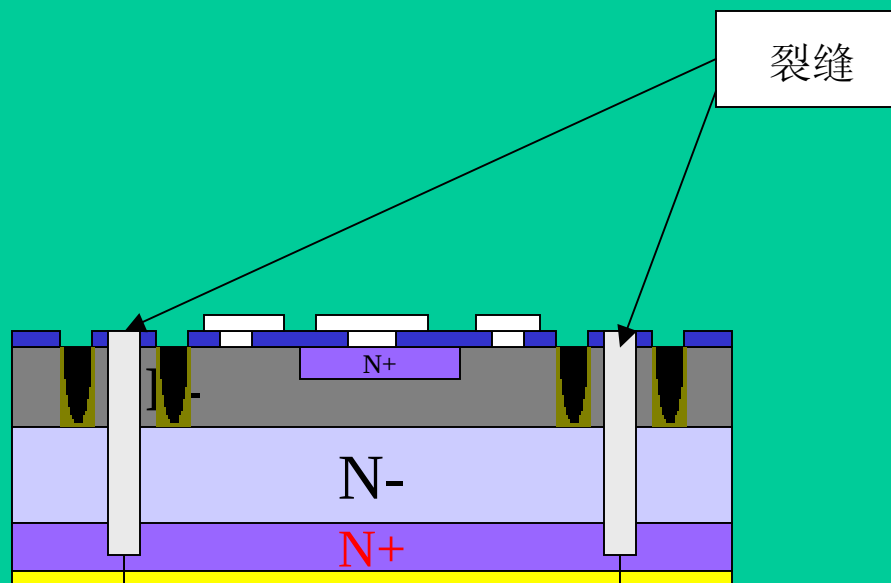
背面电极制备:

背面蒸金

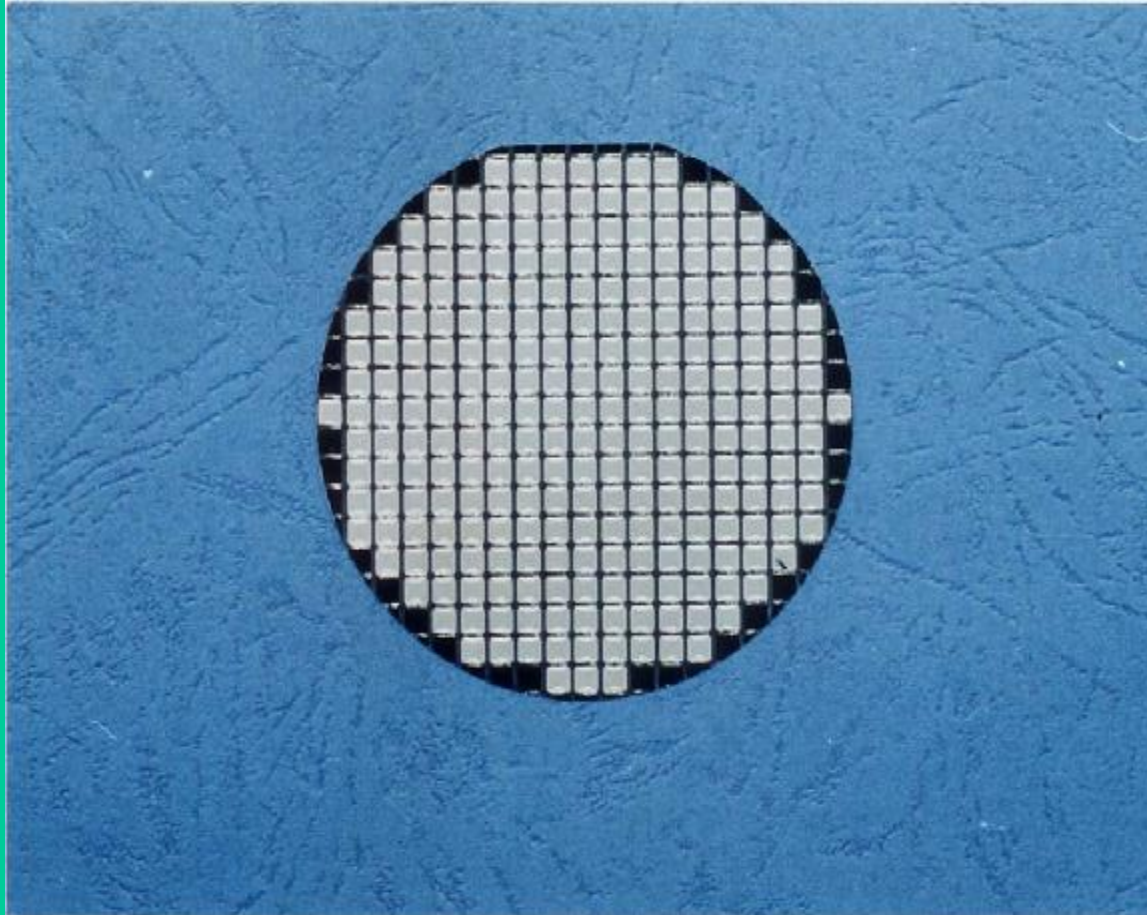


裂片:

裂片



管芯制造后照片



芯片封装

粘片

键合

塑封

电镀

切筋

测试

封装后成品照片

