

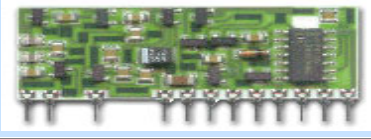
جامعة ديالى
كلية الهندسة
قسم الالكترونك

حلقة النقاشية بعنوان
(مراحل صناعة الدوائر المتكاملة)
اعداد (م . ادهم هادي صالح)
٢٠١٥-٢٠١٦

Welcome to the Lecture of :

***Integrated Circuit
(IC) Fabrication Using
Solid Material***

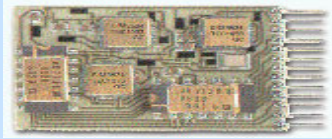
• **Typical applications**



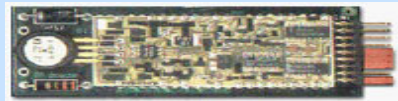
• **Home Electronics** ..



• **Automotive** ..



• **Physics Laboratory** ..



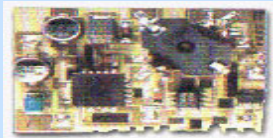
• **Sensors** ..



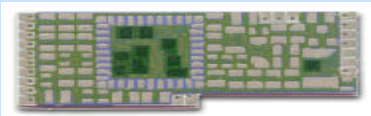
• **Security Systems** ..



• **Telecom** ..



• **Power Supply** ..



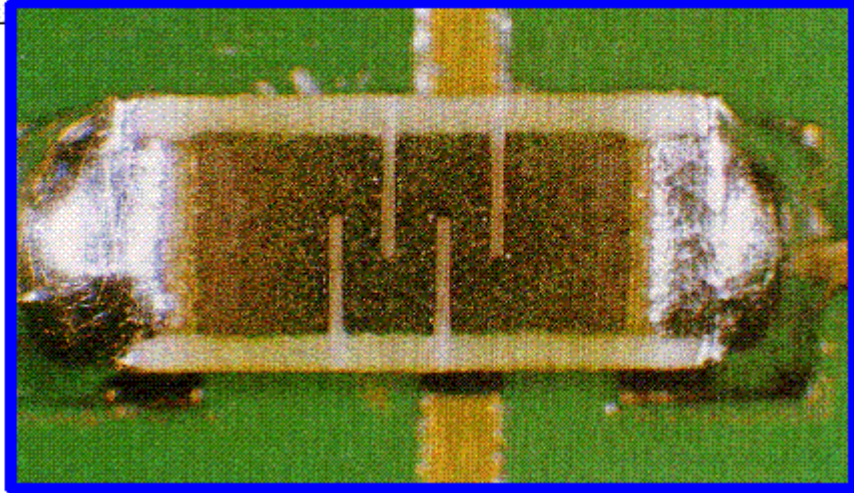
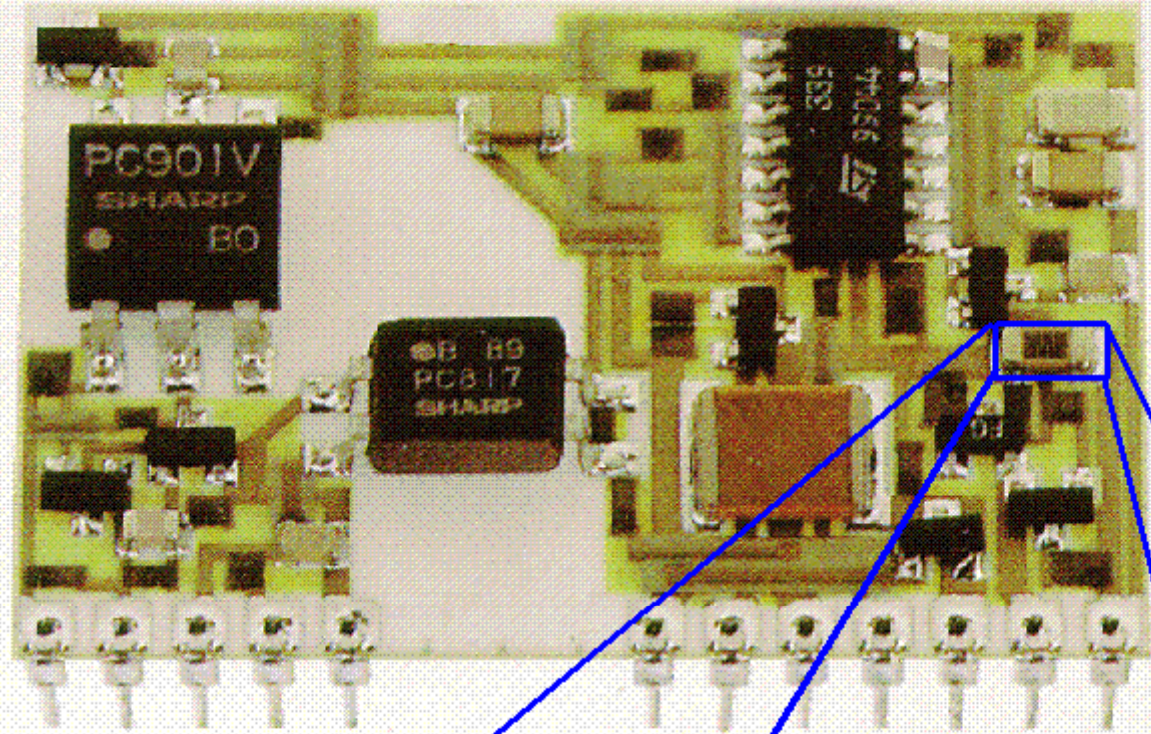
• **Medical** ..



• **Sound Equipment** ..



• **Automation** ..



IC Fabrication Steps

• Material selection:

• PURIFICATION

• Crystal Growth

• Ingot slicing to wafers

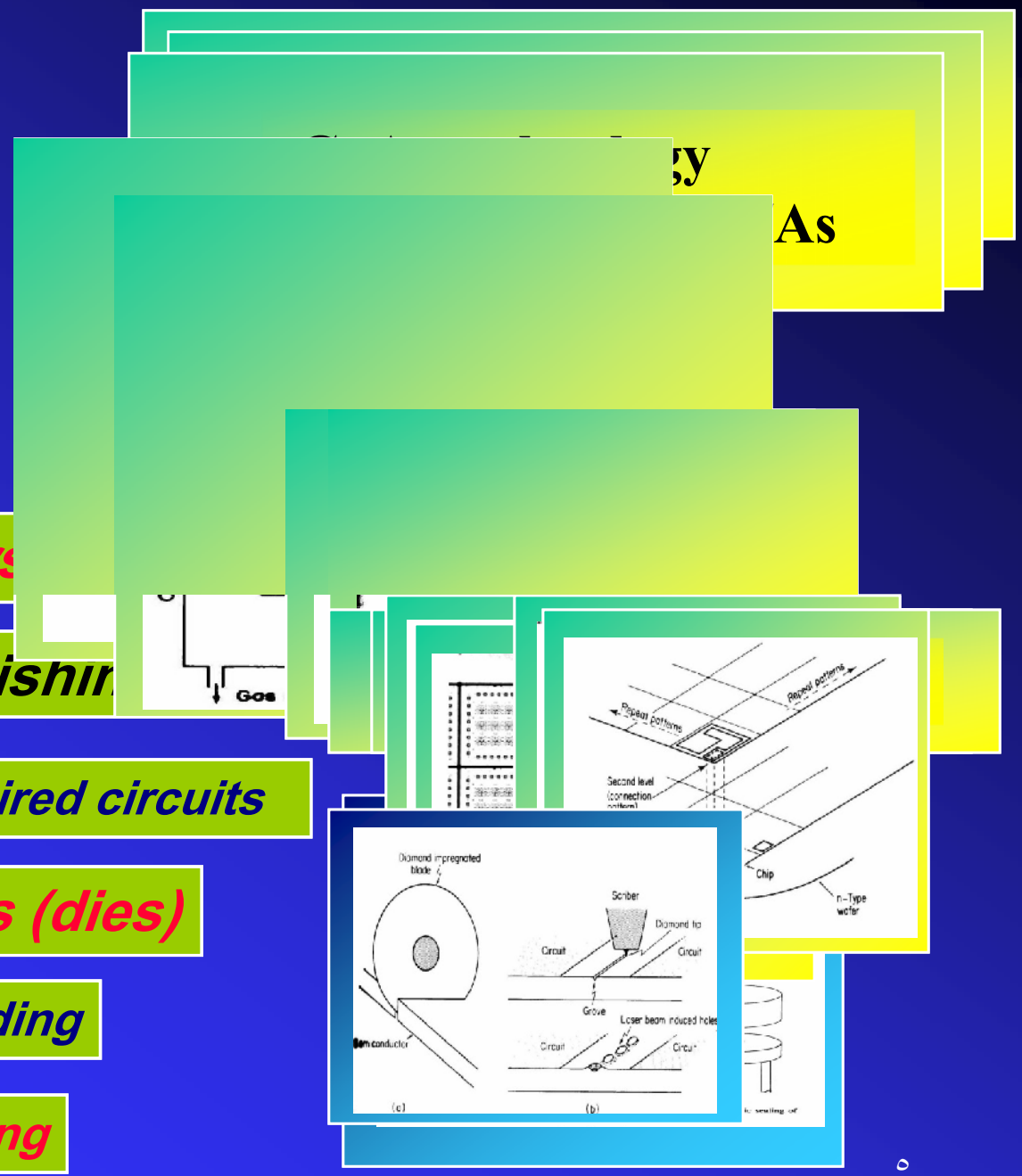
• Wafers etching & polishing

• Batch Processing of required circuits

• Wafer slicing to chips (dies)

• Die mounting & wire bonding

• Hermetic sealing & marking



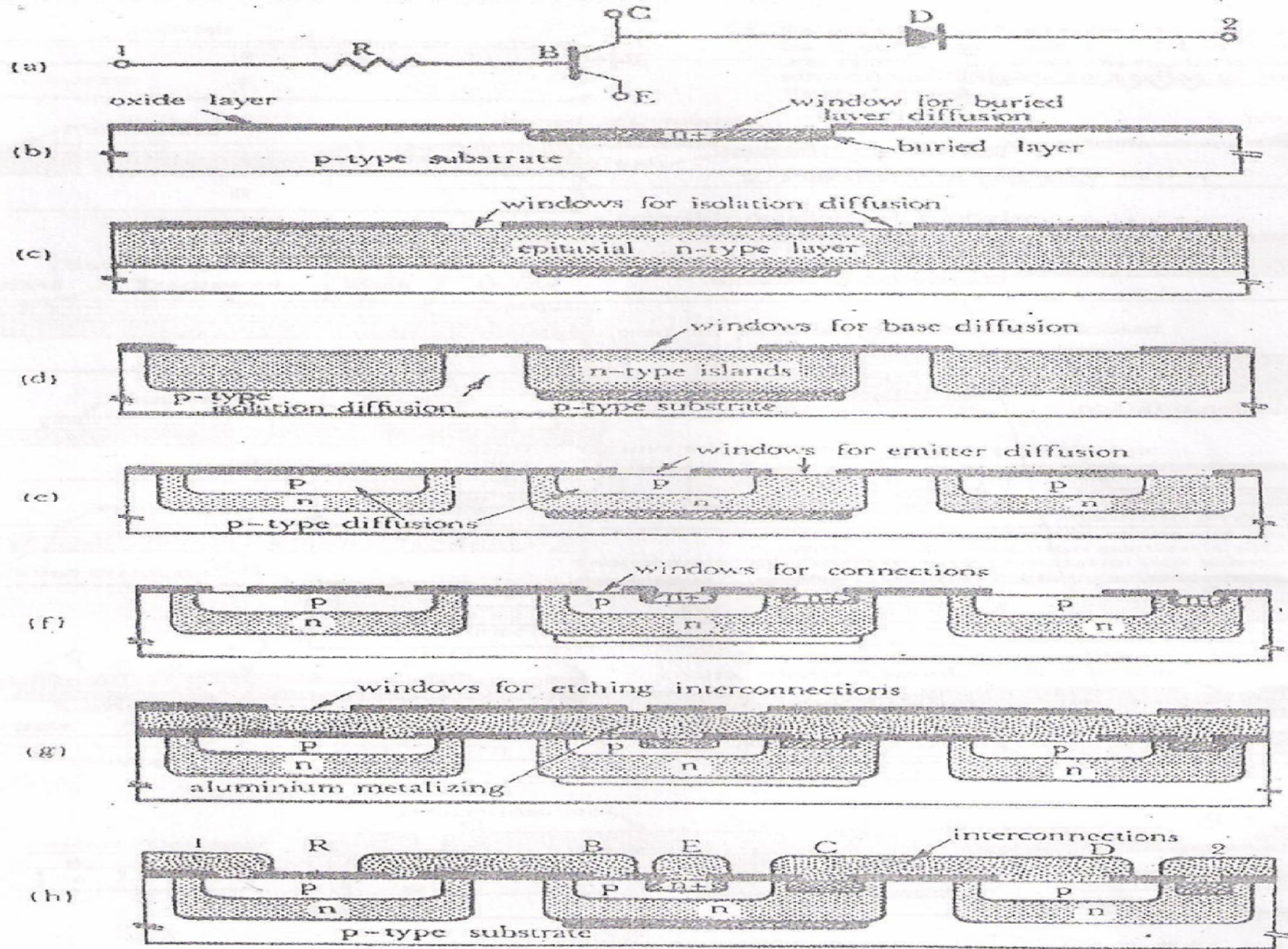


Fig. 13.9 Fabrication of a monolithic integrated circuit.