IPVF

EUREC Workshop – 6G Tandem Technologies Manufacturing

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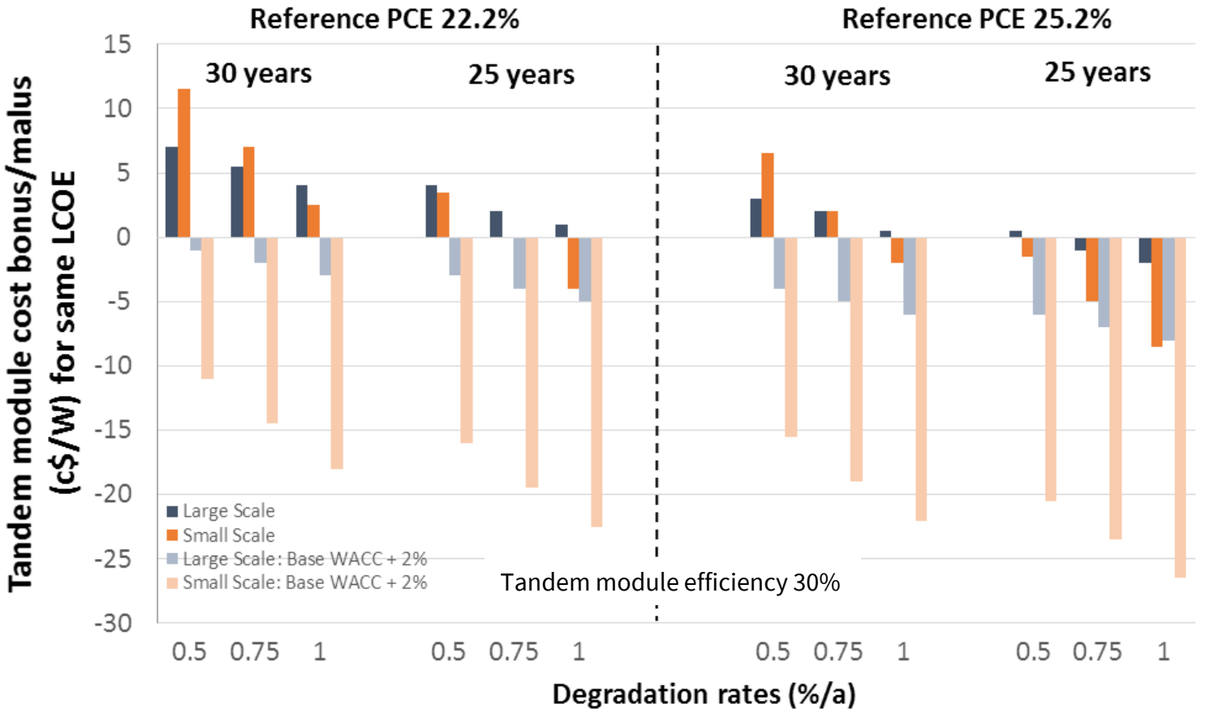
6G Tandem Technologies Manufacturing

What does it need to start tandem PV technologies manufacturing in Europe?

- Financing – bridge the valley of death between pilot line (public funding) and mass production
- Bankability / reliability – need several years of field data
- Business proposal - cost / efficiency / quality benefit?
- Credible roadmap – higher efficiencies, higher reliability, cost reductions
- Choose your markets: e.g. residential, integrated PV at first
- Large European fabs sizes of ≥5 GW (step-wise)
- **GW-scale supply chain to be established in Europe**
- **Lower environmental impact / CO2 emissions to be valued**

Cost bonus / malus tandem vs. c-Si module-based PV system



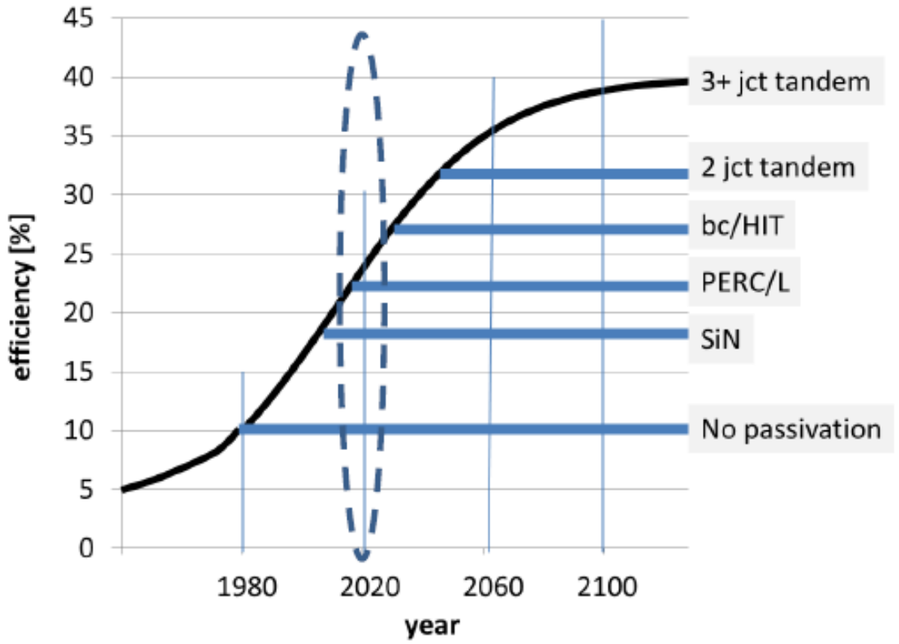
L. Oberbeck et al., Prog Photovolt Res Appl. 2020;1–8.

6G Tandem Technologies Manufacturing

The two (three, four?) main challenges for industrialization of perovskite/c-Si tandem

1. Stability / reliability / bankability - perovskite-specific accelerated tests, outdoor test results?
2. High efficiency on large area
3. Lead (?)
4. IP / freedom to operate (?)

Potential PV module efficiency evolutions



W. Hoffmann, A. Metz, EUPVSEC 2019.

Tandem PV modules will enter the market – let's make European manufacturing happen!

Thank you very much for your attention

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