



SOLAR RECEIVER TUBE TECHNOLOGY FOR INDUSTRIAL PROCESS HEAT APPLICATIONS

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Overview

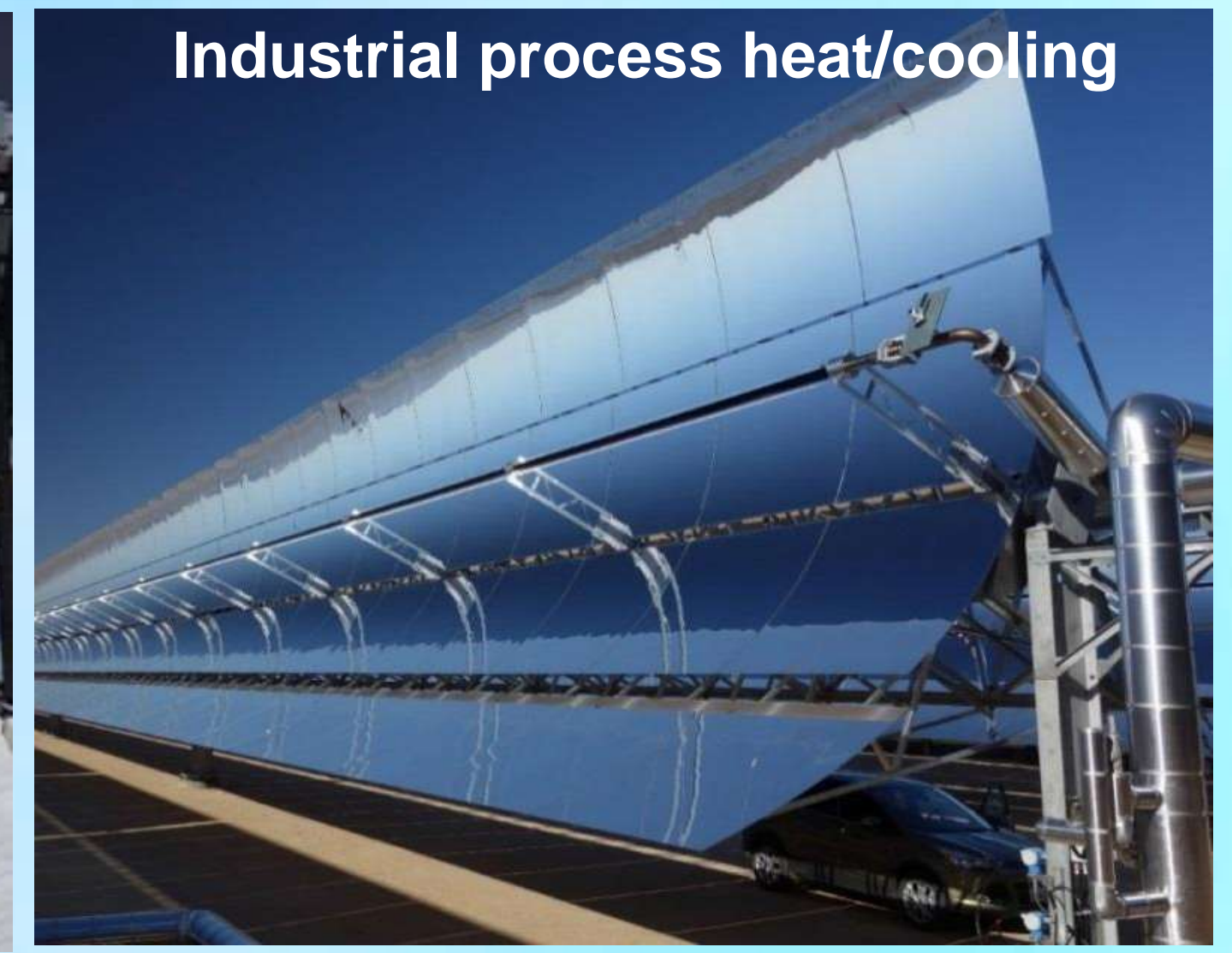
Solar receiver tube is one of the key components which have high probability to reduce the cost of overall Concentrating Solar Thermal (CST) system. ARCI developed a cost effective wet chemical process to prepare high performance absorber coating for industrial process heat applications.

Key Features

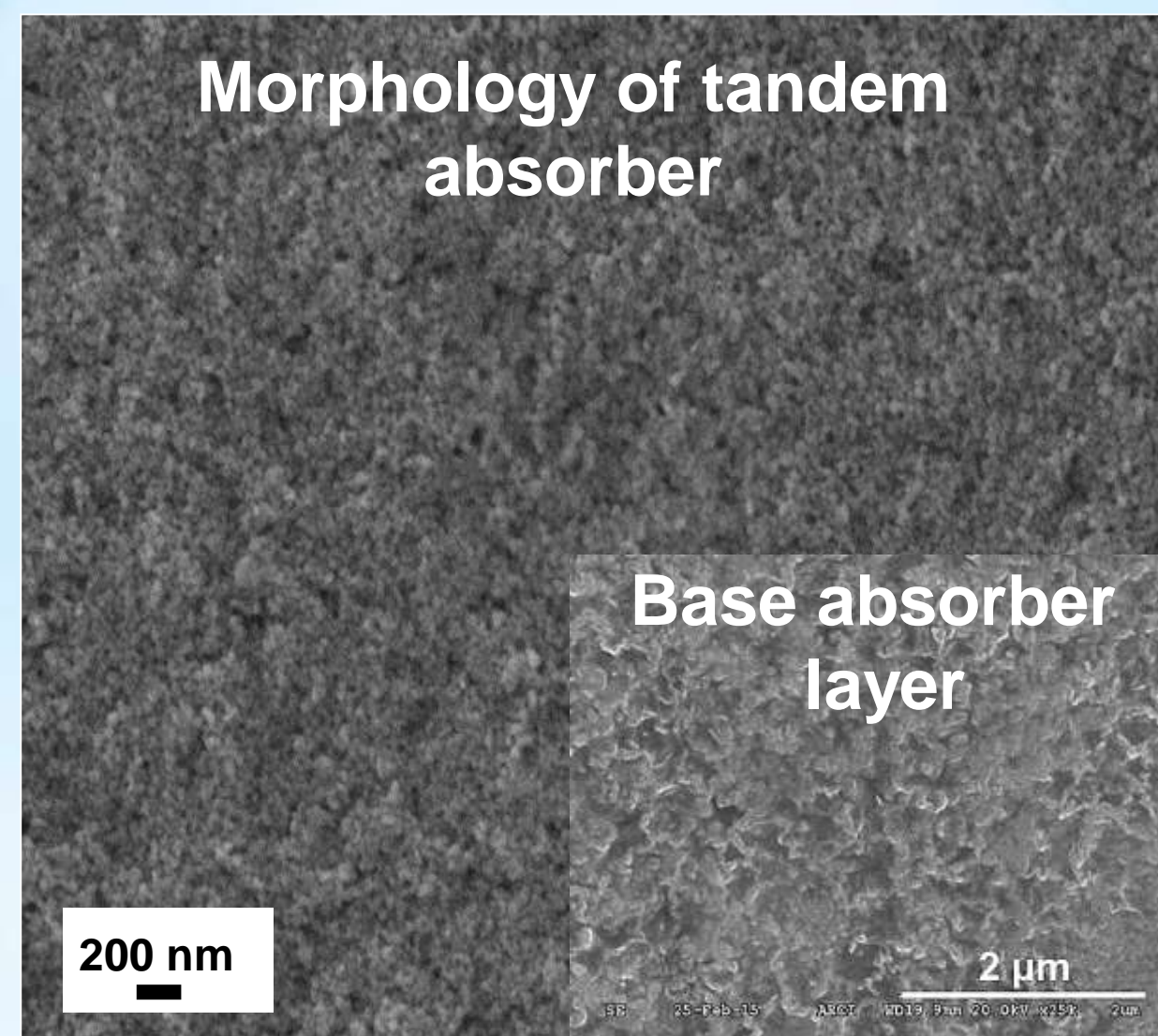
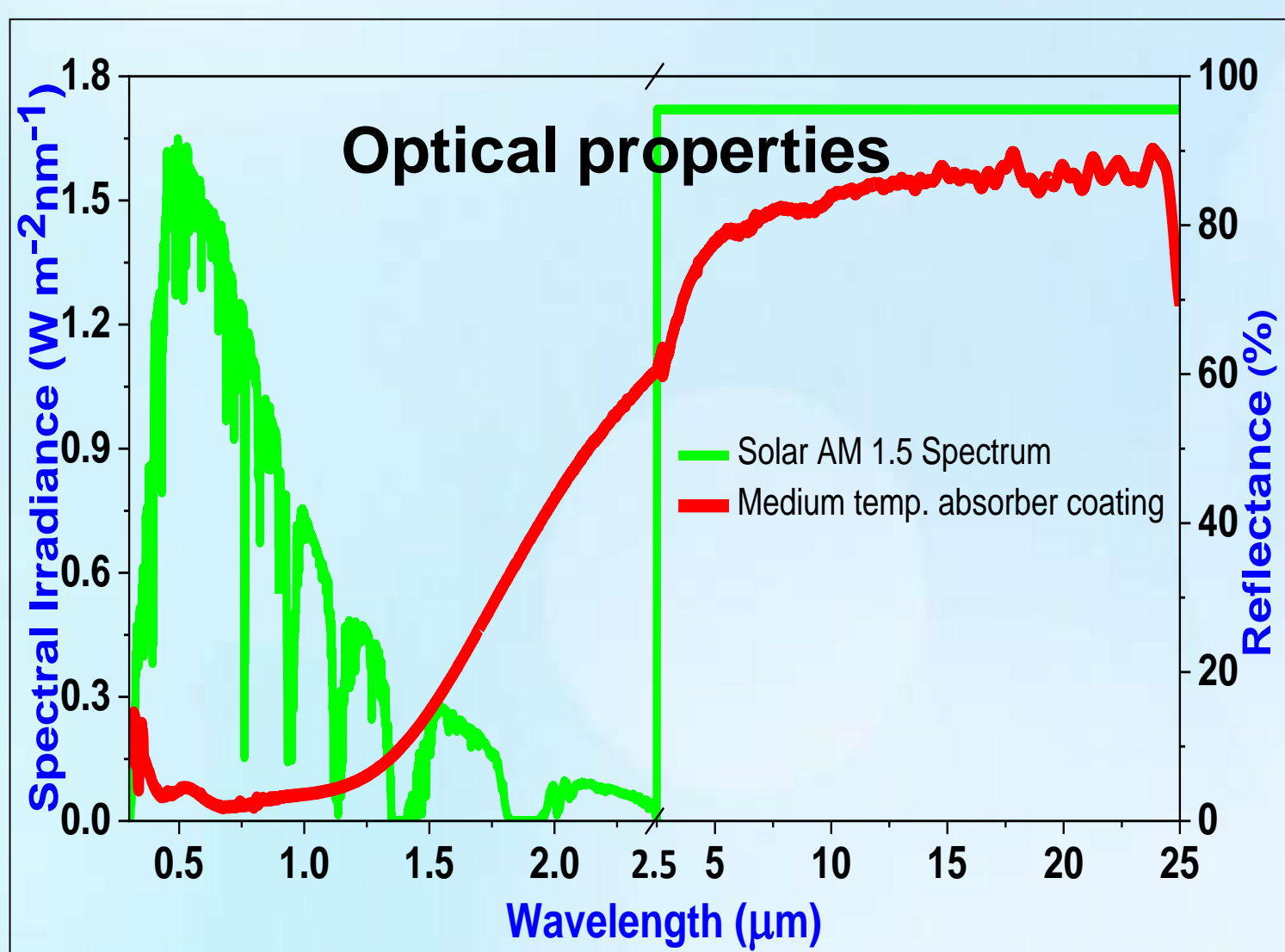
- High Solar absorptance $\alpha_{sol} = 0.90$ & Low thermal emittance $\epsilon = 0.12$ for base absorber coating
- High Solar absorptance $\alpha_{sol} = 0.95$ & Low thermal emittance $\epsilon = 0.14$ for Tandem absorber coating
- Thermally stable up to 250 °C & cost effective
- High corrosion resistance
(withstands > 200 h in salt spray test)

Applications

- Solar hot water & Sea water desalination
- Solar drying and Cooking
- Space and Swimming pool heating
- Solar cooling
- Industrial process heat applications
- Power generation



Properties of coating

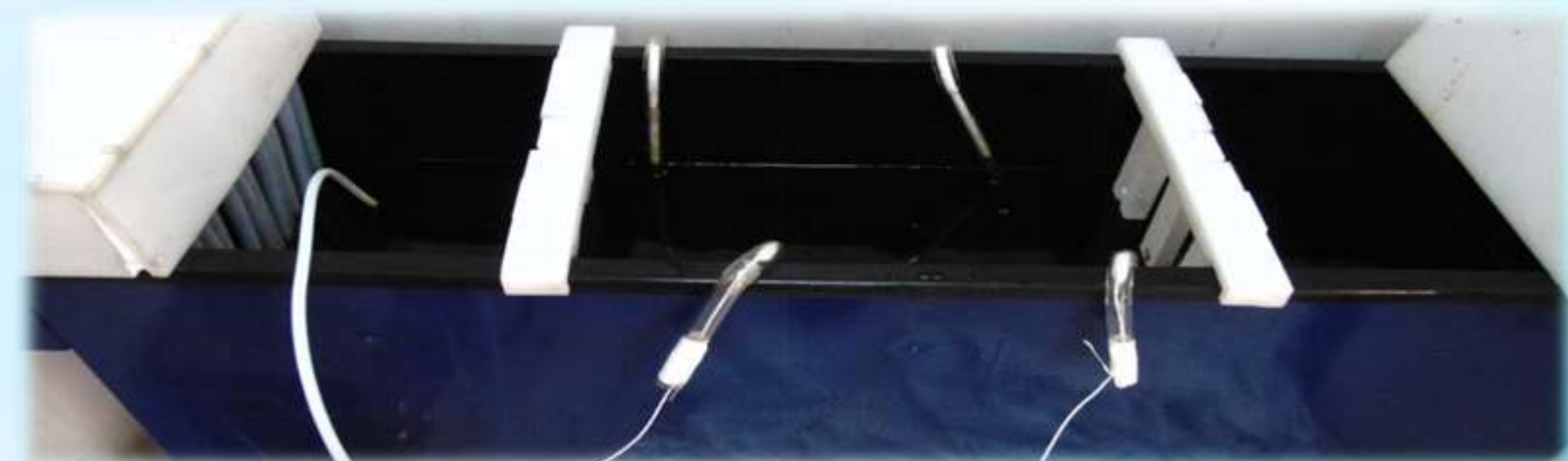


Products

ARCI Indigenously developed receiver tube (1m)



Manufacturing facilities



Chemical oxidation chamber



Dip coating machine(1m)

Technology Transfer



Technology has been successfully transferred to Greenera Energy India Pvt Ltd.



High temperature furnace



Hot-air oven