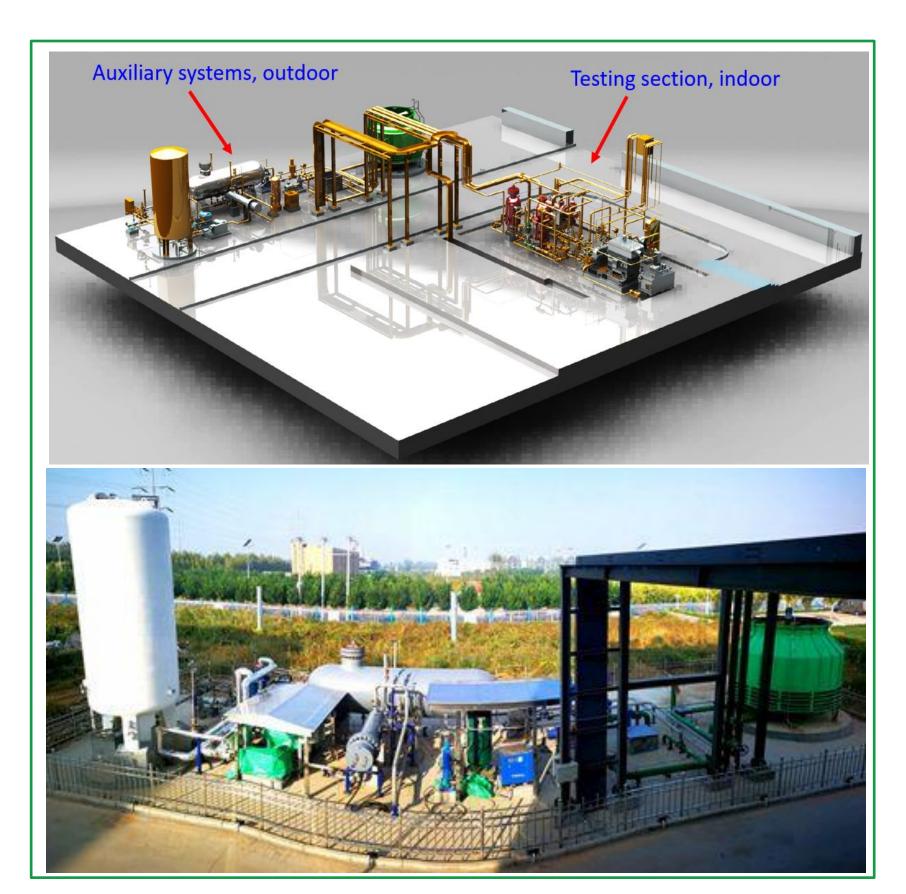
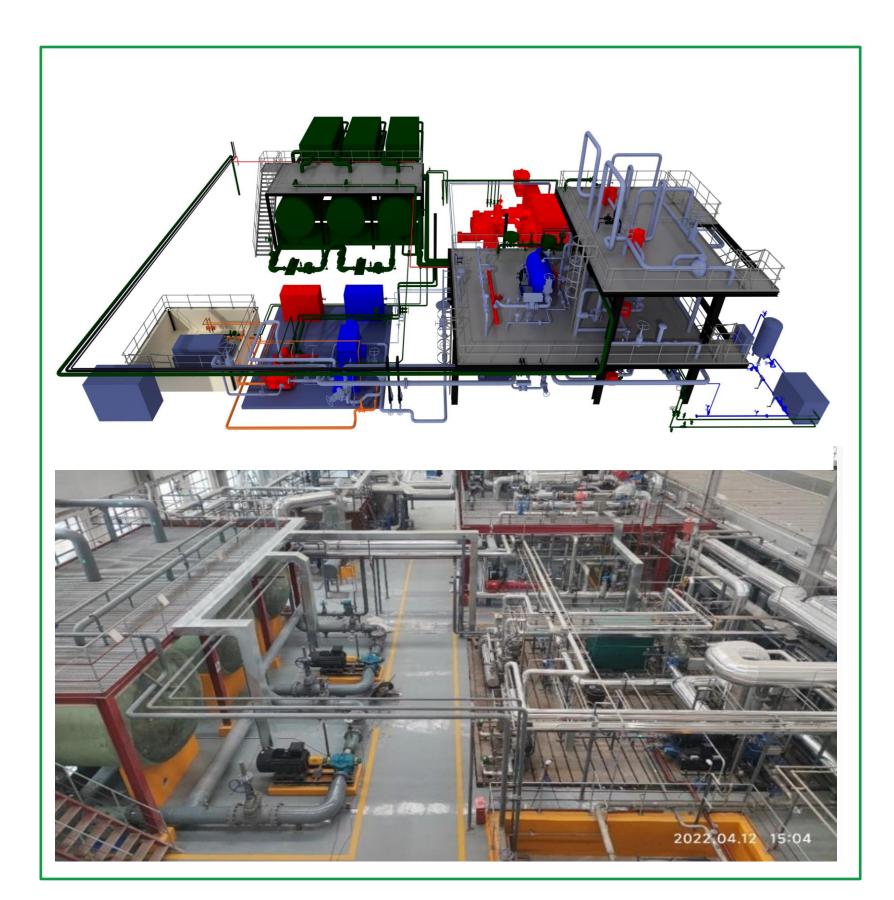


## Testing of Supercritical CO<sub>2</sub> Centrifugal Compressors for 1MWe Power Cycle

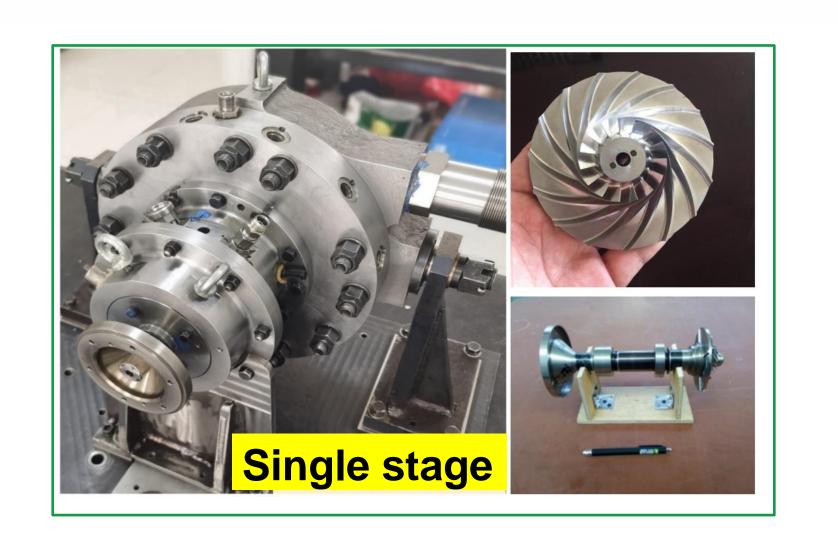
Yuming Zhu, Shiqiang Liang, Chaohong Guo, Xiang Xu (Institute of Engineering Thermophysics, Chinese Academy of Sciences, China)

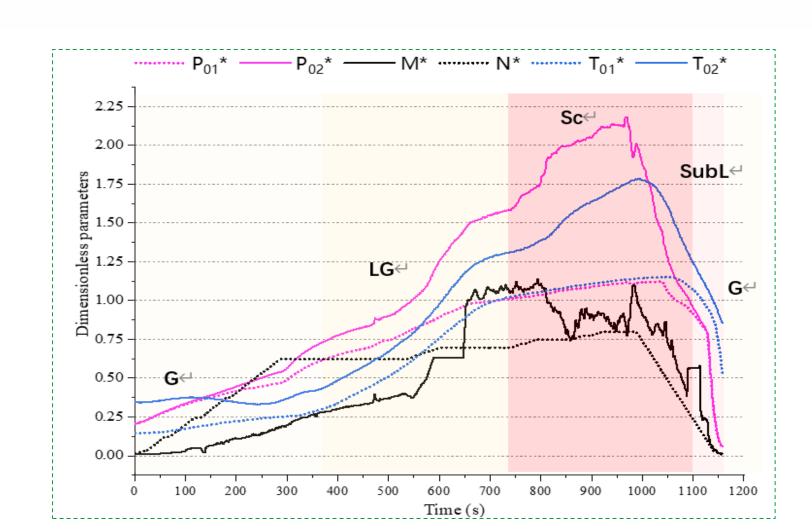


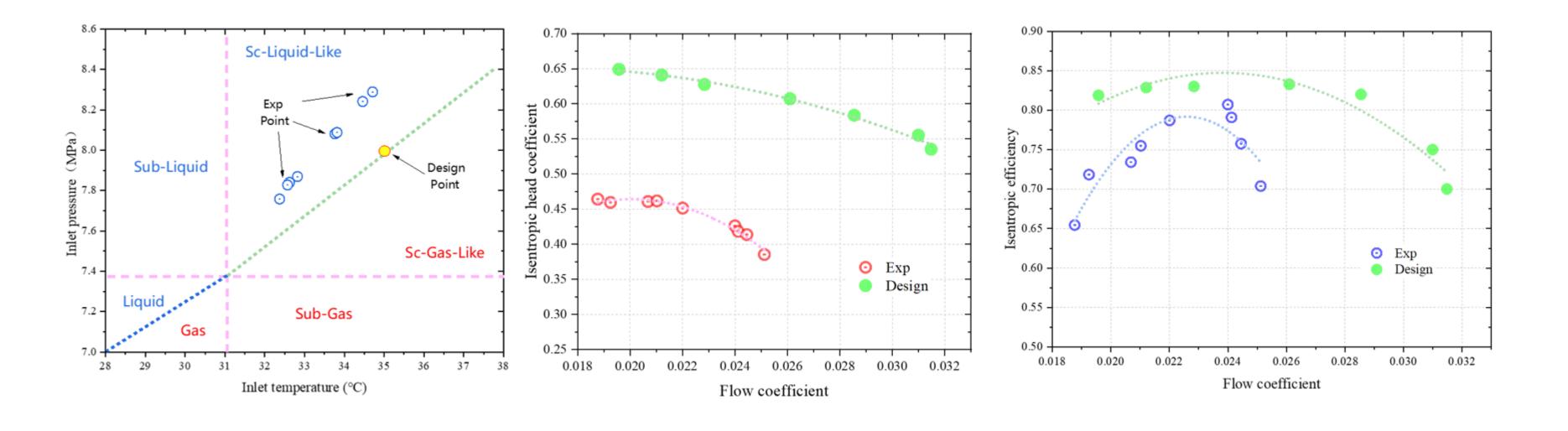
China's first MWe-level sCO<sub>2</sub> compressor test platform

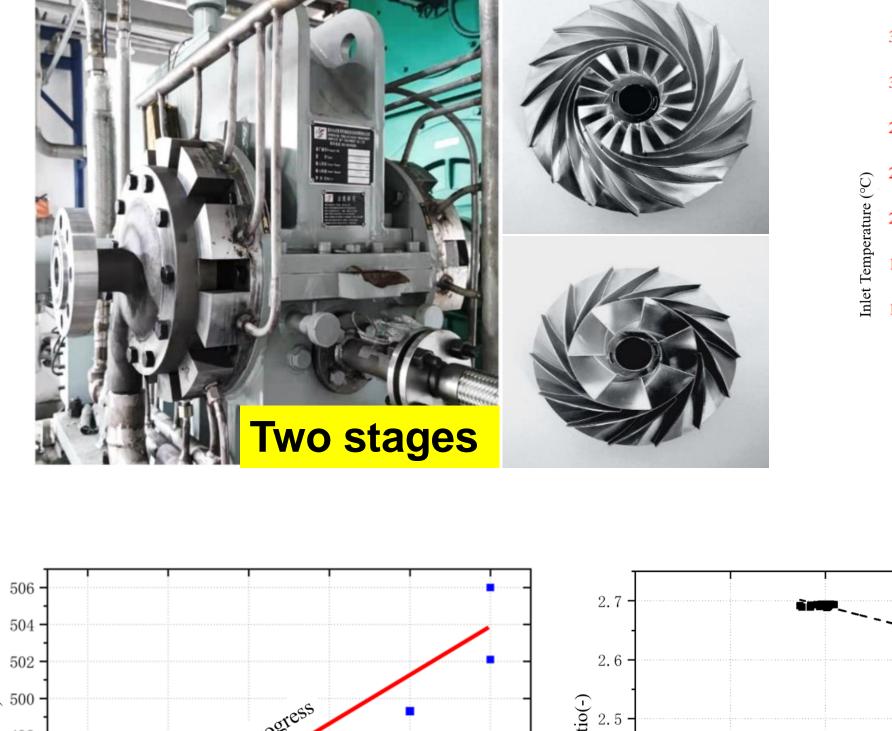


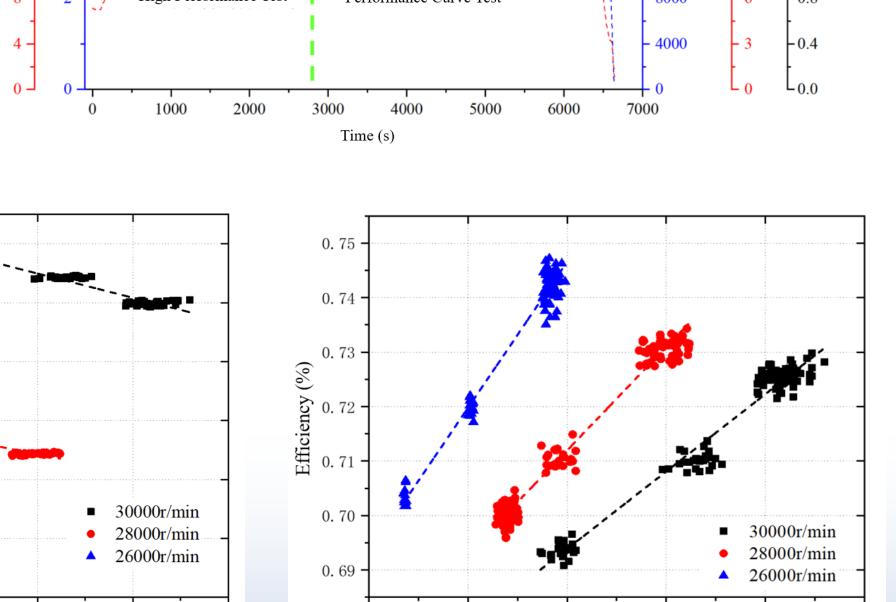
1MWe sCO<sub>2</sub> power cycle











Mass Flow (kg/s)

- USA, STEP (Design)

  China, IET 
  China, IET 
  China, TPRI

  O China, TPRI

  O WSA, Sandia
  USA, BMPC

  Sow

  Idage of the proper of the
  - ◆The maximum test speed of the singlestage centrifugal compressor is 32000 rpm
  - ◆The mass flow rate is about 13 kg/s, and the pressure ratio is close to 2.0.
  - For the two-stages centrifugal compressor, the operating speed has reached 100% of the design speed, and the compressor performance curves at 90%, 80%, 70%.
  - The maximum total pressure ratio in the experiment is more than 2.69, and the maximum mass flow is close to 16kg/s.

8<sup>th</sup> International Supercritical CO<sub>2</sub> Power Cycles

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