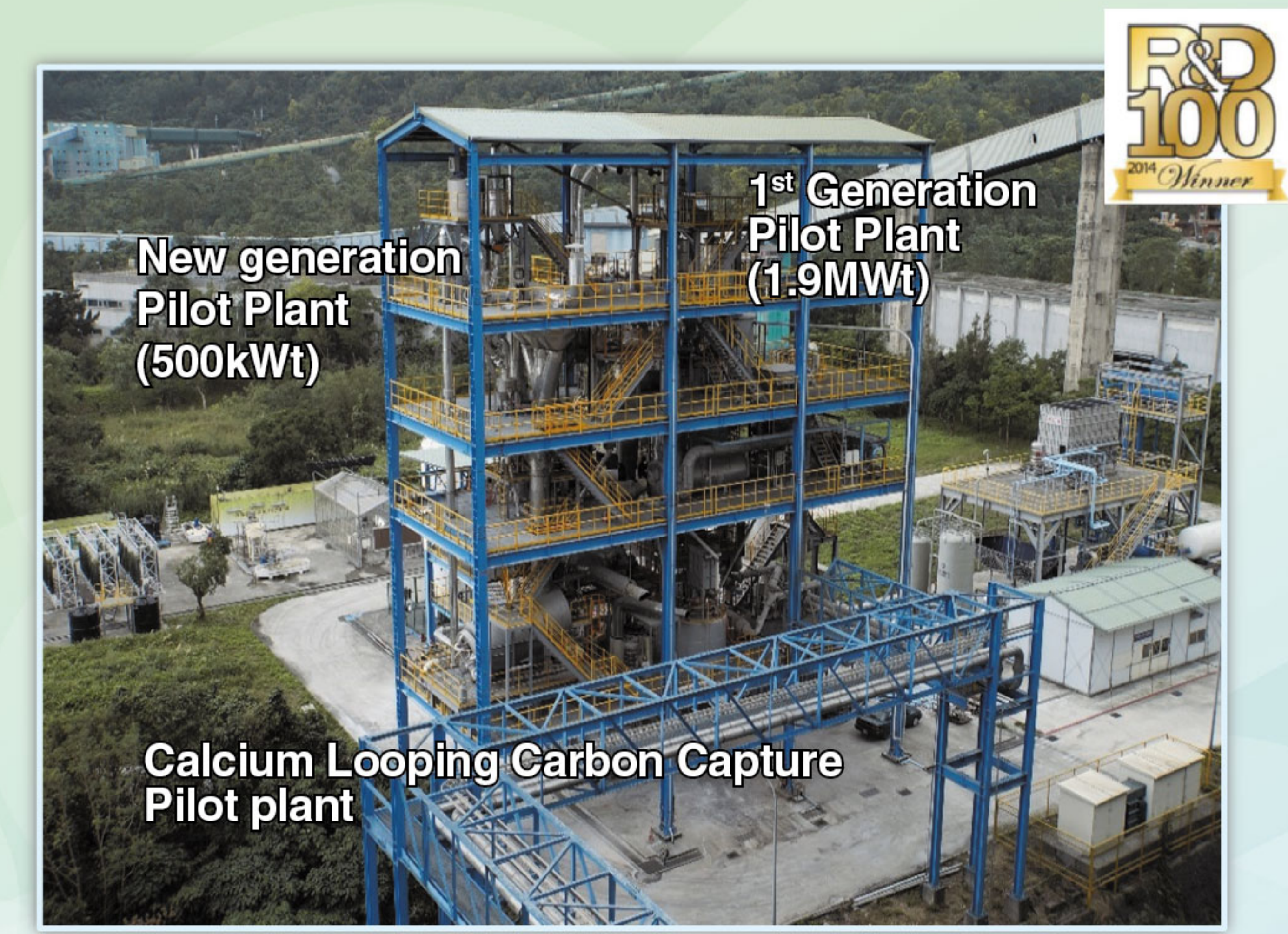




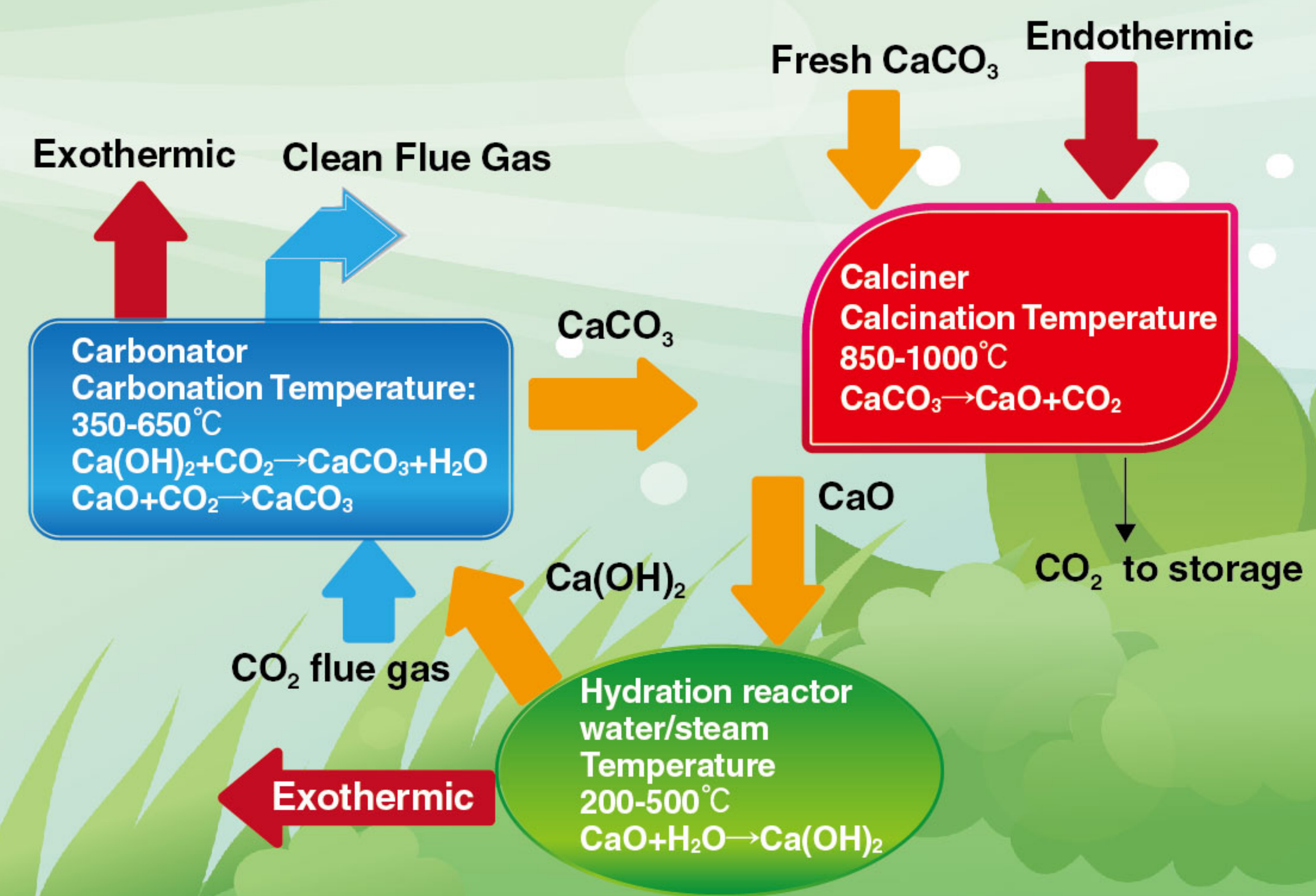
# New Generation Calcium Looping Carbon Capture Technology



- **500kW<sub>th</sub> calcium looping carbon capture pilot plant**
  - Hydration-integrated cascade cyclone calcium looping system
  - Flue gas from Taiwan Cement Company
  - 0.16 ton/h carbon capture capacity
  - Carbon capture efficiency >80% (Ca/C ratio <5).
- **Advantageous position**
  - Sorbent derived from cement plant / Inactive sorbent reclaimed by cement process
  - CO<sub>2</sub> removal with inherent high quality heat generation
  - Energy penalty <20%
  - Carbon capture cost <30 USD
- **2014 R&D100 Awards / 2014 ITRI outstanding research gold medal award.**
- **Development Strategy:**
  - Establish 30MW<sub>th</sub> Level Demonstration Plant
  - Promote the cooperation between CCS R&D Alliance and industrial community
  - Connect carbon capture process with CO<sub>2</sub> utilization technology



## Principle of New Generation Calcium Looping Carbon Capture Technology



## Advantages

- Sorbent activation by steam hydration
- Heat exchange performance promoted by cascade cyclone system
- Vertical structure for reducing site area

