

le Hybrid Cooling
x Electricity Cost

- Part
- Industrial & ...
 - Construction ...
 - Facility Manag...

Mathem

Mixed Integer Non-linear Pro
variable of part load ratio of
of steam turbine ch
electrical ...

Metal-Quinone Framework To Capture CO₂

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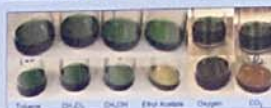
Need for the Study

1. MOFs: well-defined nanomaterials with super large surface area;
2. ... off-line analyses are often ... MOFs' absorption;
- ... such a capture with a ... is rare;
- ... MOF has minimum

... dione structure;
... quinone.

1,4-anthraquinone
... used for CO₂ capture

Colorful Aromatic Alkoxide



- In one minute, ethyl acetate or CO₂ brought about color change;
- Preliminary reactions showed selectivity.

Spectroscopic Analysis



¹³C-NMR Analysis

Quinone in THF
Quinone + dH₂O in THF

Results

- 1,4-anthraquinone showed fast complete ... framework;
- The framework is insoluble in ... solvents and CO₂ (density < 1.35 g/cm³);
- The framework adopts a large ... ~16 Å;
- The colorful Aluminum Alkoxide ... detect CO₂ with selectivity;
- BONUS: The pre-framework ... amount of organic solvents.

Future Work

- AI-NMR to confirm Al's coordination state;
- Test the framework's capacity to absorb ... sources;
- ... simulation to reveal ... relationships;
- ... broad

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