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# Solvent Evaluation: EDA

- \* Ethylenediamine
  - \* Work in University of Texas at Austin
- \* Physical properties
  - \* Density, Viscosity, Heat absorption
- \* Absorption rate
- \* Degradation
  - \* Thermal degradation & Oxidative degradation
- \* Foaming Tendency

# Solvent management

- \* Amine Thermal degradation screen (UT Austin)
  - \* MEDA
  - \* 2-PE
  - \* AMP/PZ
- \* Thermal degradation (Tsinghua University)
  - \* Sulfite impact on MEA thermal degradation
  - \* Amine blend (maybe in the future)

# Degradation

- \* Solution make up cost
- \* Corrosion issue
- \* Thermal degradation
  - \* At higher temperature in the capture plant
  - \* With high CO<sub>2</sub> partial pressure
  - \* Without O<sub>2</sub>
  - \* Carbamate polymerizes
  - \* IC, IC/MS

Thank you