Wildcat Discovery Technologies

High Throughput Assays for Gas Separation and Storage

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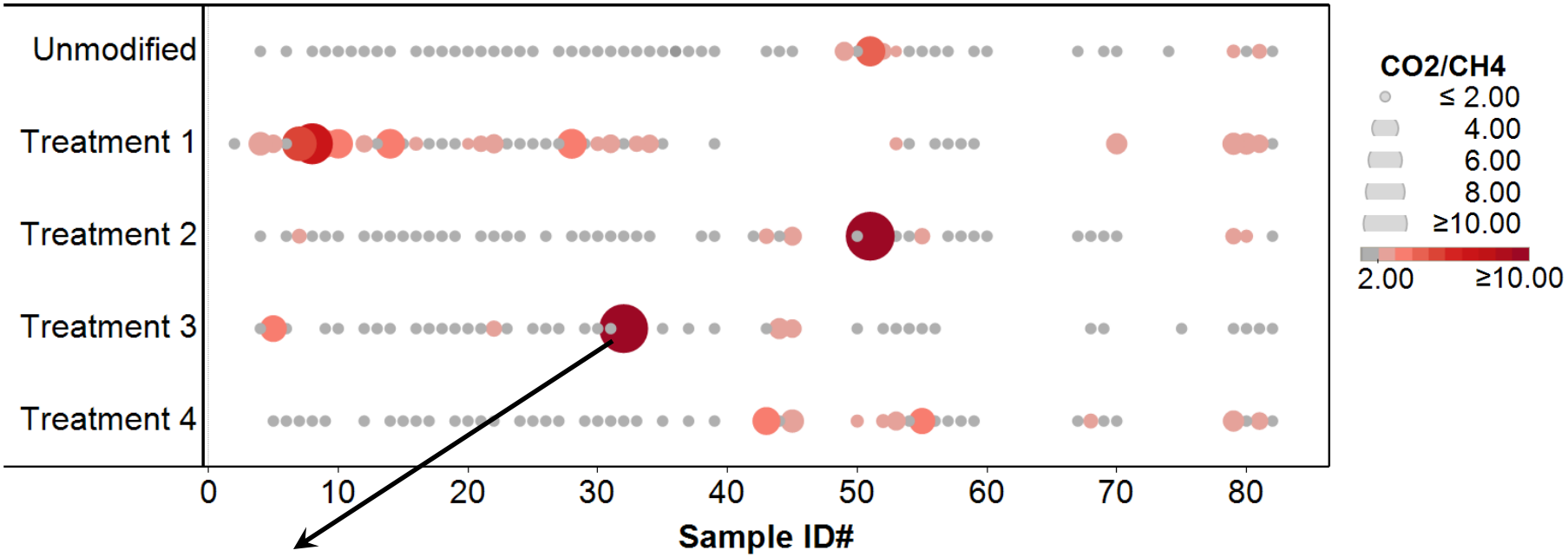
Wildcat's High Throughput Gas Sorption Assay

- Highly parallel volumetric sorption measurements
- Throughput: **>400 uptake measurements/day**
- Multiple gas compatible
  - CO_2, H_2, N_2, CH_4…..
- Variable assay: uptake, rate, isotherms, cycling, etc.
- Operating range:
  - 1st gen. 0.1-60 bar, 30-180 °C
  - 2nd gen. 0.001-200 bar, 30-500 °C
- 2nd gen has integrated mass spec for measurement of multi-component gas mixtures (e.g. CO_2/N_2)
- 1st gen. system operational and validated
- 2nd gen. prototype undergoing runoff testing, operational in ~2 months

Gas Separation & Purification

Gas separation demonstration screen

- 90 commercial samples
- 5 different treatments
- 450 total samples
- 4 gases
- 1,800 sorption isotherms
- 9 days



>10x uptake of CO_2 vs. Methane

2700 Separation Tests - 9 DAYS

Wildcat's High Throughput Gas Flow Assay

- Highly parallel gas flow measurements
- Variable assay: permeability, selectivity, rate, etc.
- Can evaluate membranes, packed beds (breakthrough measurements), etc.
- Throughput: **10-100 measurements/day**
- Multiple gas compatible
  - CO_2, H_2, N_2, CH_4…..
- Integrated mass spec. for measurement of multi-component gas mixtures (e.g. CO_2/N_2)
- Operating range: 0.001-60 bar, 30-180 °C
- Prototype undergoing runoff testing, operational in ~2 months