

Evaluating viability of zeolite as a methane capture device in enclosed/semi-enclosed cattle farms

Methane emissions from livestock in enclosed or semi enclosed environments represent a significant contributor to greenhouse concentrations, and can pose potential safety hazards, even though their half-life is quite short compared to carbon dioxide their impact is still noticeable, but apart from their dangers methane can also be useful as an energy source. This presentation aims to assess viability of zeolite or other porous materials in methane capture and regeneration to be used as an energy source in rural areas. viability is evaluated by simulating methane flow from cattle in farms and also looking at molecular simulations of zeolite and how it performs when exposed to methane, while also presenting a theoretical prototype system that can be incorporated into barns.

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