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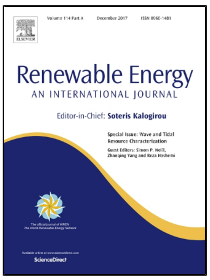

Airflow and insulation effects on simultaneous syngas and biochar production in a top-lit updraft biomass gasifier

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Highlights

- The product distribution of the TLUD reactor is affected mainly by airflow.
- Biochar yield decreases with the airflow regardless of the biomass.
- Hydrogen content in the gas increases with increase in the airflow rate.
- The insulation improves heat distribution and increases the tar content in syngas.
- The tar in biochar is minimized with the addition of the insulation.

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