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Title of PhD thesis: SYNGAS FUELED SOLID OXIDE FUEL CELL (SOFC) – EXPERIMENTS AND ANALYSIS ON GAS CHARACTERIZATION AND CELL PERFORMANCE

Publications and conference presentations related to my PhD research:

1. Rakesh N, S. Dasappa. Analysis of tar obtained from hydrogen-rich syngas generated from a fixed bed downdraft biomass gasification system. *Energy Conversion and Management* (2018), 167, 134–146.
2. Rakesh Narayana Sarma, Anand M. Shivapuji, Dasappa Srinivasaiah. Solid Oxide Fuel Cells fuelled by carbonaceous fuels: a thermodynamics-based approach for safe operation and experimental validation. *Energy Sources, Part A: Recovery, Utilization, and Environmental Effects* (2022), 44(2), 3509-3531.
3. Rakesh N, S. Dasappa. A critical assessment of tar generated during biomass gasification - formation, evaluation, issues and mitigation strategies. *Renewable and Sustainable Energy Reviews* (2018), 91, 1045–1064.
4. Monikankana Sharma, Rakesh N, S. Dasappa. Solid oxide fuel cell operating with biomass derived producer gas: Status and challenges. *Renewable and Sustainable Energy Reviews* (2016), 60, 450–463.
5. Arashdeep Singh, Arvind Gupta, Rakesh N., Anand M. Shivapuji, S. Dasappa. Syngas generation for methanol synthesis: oxy-steam gasification route using agro-residue as fuel. *Biomass Conversion and Biorefinery* (2022), 12 (5), 1803–1818.
6. Rakesh N., Dasappa S. (2021). Carbon Deposition on the Anode of a Solid Oxide Fuel Cell Fueled by Syngas—A Thermodynamic Analysis. In: Bose M., Modi A. (eds) *Proceedings of the 7th International Conference on Advances in Energy Research*, IIT Bombay, Mumbai. Pages 1083-1090, Springer (Book chapter)
7. Rakesh N., S. Dasappa (2018). Biosyngas for electricity generation using fuel cells – A gas quality assessment. *Proceedings of the 26th European Biomass Conference and Exhibition (EUBCE - 2018)*, Copenhagen, Denmark. Pages: 708-712
8. Rakesh N., S. Dasappa (2019). Performance Analysis and Electrochemical Impedance Spectroscopy Studies on Hydrogen Fueled Operation of an Electrolyte Supported SOFC (Solid Oxide Fuel Cell) Button Cell. *Twelfth International Symposium on Advances in Electrochemical Science and Technology*, Chennai