



Clean
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Research and policy development to advance the green economy in South Africa

Abstract:

The Government of South Africa, through the Department of Environmental Affairs, has set up the Green Fund to support the transition to a low-carbon, resource-efficient and pro-employment development pathway. The Green Fund supports green economy initiatives, including research, which could advance South Africa's green economy transition. The biorefinery concept is a vital concept for development of the green economy, through the production of energy, fuels, chemicals and materials from bio-based resources. This presentation does not only covers Green Fund project but also other relevant researches completed at Process Engineering Department in Stellenbosch University. A wide range of studied biorefinery scenarios including the following steps i.e. Techno-economic analysis (TEA), life cycle assessment (LCA) and social impact will be presented and discussed. Key policy messages resulted from this research wraps-up the main findings for government, stockholders, investors and researchers

Biography:



Dr Somayeh Farzad is a researcher at department of process engineering, Stellenbosch university of South Africa. She received PhD from Tarbiat Modares University, MEng from Sharif University and BEng from Tehran University in Chemical Engineering. Her research focuses on waste valorization, i.e. agricultural and forest residues and waste tire through biorefinery development and Life Cycle Assessment (LCA). She has been involved in sustainability studies of biorefinery development and green tire production in national and international contexts. She won the award for exceptional achievements from Stellenbosch University in 2017 as a result of her publications and research output. Furthermore, she was representative of South African government in the "2015 Regional Leaders Summit Energy Network meeting, Canada" and keynote speaker at "Bioresource technology conference 2018, Spain" as well as "Biorefinery conference 2019, South Africa".



Dr Mohsen Mandegari is a researcher at the Department of Process Engineering, Stellenbosch University South Africa since 2014 and holds PhD in Chemical Engineering from Tarbiat Modares University, Tehran, Iran, 2012. His researches focus on biorefinery developments, Techno-economic studies and energy/exergy analysis. The National Research Foundation (NRF) has rated Dr Mandegari as a Y-rated researcher (i.e. "Promising Young Researcher") in 2019 based primarily on the quality and impact of his research outputs over the past eight years, taking into consideration the evaluation made by local and international peers. In terms of international recognition, Dr Mandegari has published more than 25 papers (averaged IF>5) and four book chapters along with spoken at 9 International conferences. He has been reviewer of several top journals in his field, and invited reviewer by the Department of Energy (DoE) in the USA on bioenergy and biorefinery-related research proposals. Furthermore, He is the winner of award for exceptional achievements from Stellenbosch University in 2017 and 2019 and nominated young researcher of SU to attend 2nd BRICS Young Scientist Forum in China.

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