

Title:	Upgrading of lignocelluloses prior to co-gasification with coal
Abstract:	Co-gasification of lignocelluloses with coal is technically constrained by the rapid kinetics of thermal degradation and the production of volatile oxygenates from lignocelluloses, compared to coal. Both these effects can be addressed by torrefaction or pyrolysis of lignocelluloses, to obtain a char that is more similar to coal in terms of reduced oxygenates formation and kinetics of reaction during gasification. Experimental development of such torrefaction/pyrolysis processes with local biomasses is performed in the present project. Co-gasification of lignocellulose with coal to produce syngas that is used for the production of a range of fuels and chemicals, represents a strong industrial technology base for lignocellulose biorefineries.
Lead institution:	Stellenbosch University
Partner institutions:	-
Student name:	Frank Nsaful
Supervisor name:	Prof JF Görgens
Degree:	PhD
Funded by:	Industry
Start date:	Jan 2013
End date:	March 2017
Feedstock:	Pine, bamboo and corn stover
Value chain products:	Drop-in fuels (diesel, petrol, jet fuel), chemicals, waxes, etc.
Geographic source of the feedstock:	All provinces