



Research Topics in Renewable Energy for 2019

Dosent / Lecturer: Prof Johann Görgens		Email: jgorgens@sun.ac.za		
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Fakulteit / Faculty: Engineering		Department / Department: Process Engineering		
Navorsingsarea / Area of Research: Bio-energy / fuels, chemicals and electricity from biomass in biorefineries				
Algemene beskrywing van navorsingsveld / General description of research area: Biofuels production by biological and thermochemical processes Co-production of bio-energy with high-value chemicals and electricity				
Lys van onderwerpe/List of topics:		M.Eng. (Research)	Ph.D.	Funding
Fermentation process development and scale-up with advanced yeasts, for conversion of paper wastes into bio-ethanol		X	X	X
Fermentation process development and scale-up with advanced yeasts, for conversion of spent sulphite liquor from hardwoods into bio-ethanol		X		X
Techno-economic and environmental comparison of alternative route for hydrogen production from water or biomass		X		X
Techno-economic assessment of alternative energy products from paper wastes		X	X	X
Valourisation of lignin residues from a bio-energy process through combined enzymatic degradation and pyrolysis		X	X	X
Spesifieke voorvereistes / Specific requirements: A Masters degree in the relevant scientific field of study is required to enrol for a PhD and an Honours degree in the relevant field is required to enrol for a Masters.				
For MEng enrolment: BScEng, BEng, BScHonsEng or HonsBSc in Chemical engineering, Biochemistry, Biotechnology or Microbiology				
For PhD enrolment: MSc, MScEng or MEng in Chemical engineering, Biochemistry, Biotechnology or Microbiology				
Befondsing beskikbaar / Funding available: Yes				