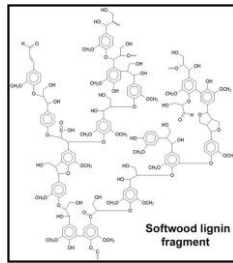




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Wood Chemistry and Wood Composite Products



Dr Luvuyo Tyhoda





Main focus areas



- Wood quality
- Biorefinery
- Wood composite products
- Wood preservation



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Wood quality





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Chemical characteristics of cork oak (*Quercus suber* L.) trees growing in Stellenbosch

Student: Eugene Greyling

Supervisor: Dr Luvuyo Tyhoda

Co-supervisor: Prof Martina Meincken





Objectives



- **Chemical analysis:**
 - Extractives
 - Suberin
 - Lignin
 - Polysaccharides (Cellulose and hemicelluloses)
 - Ash





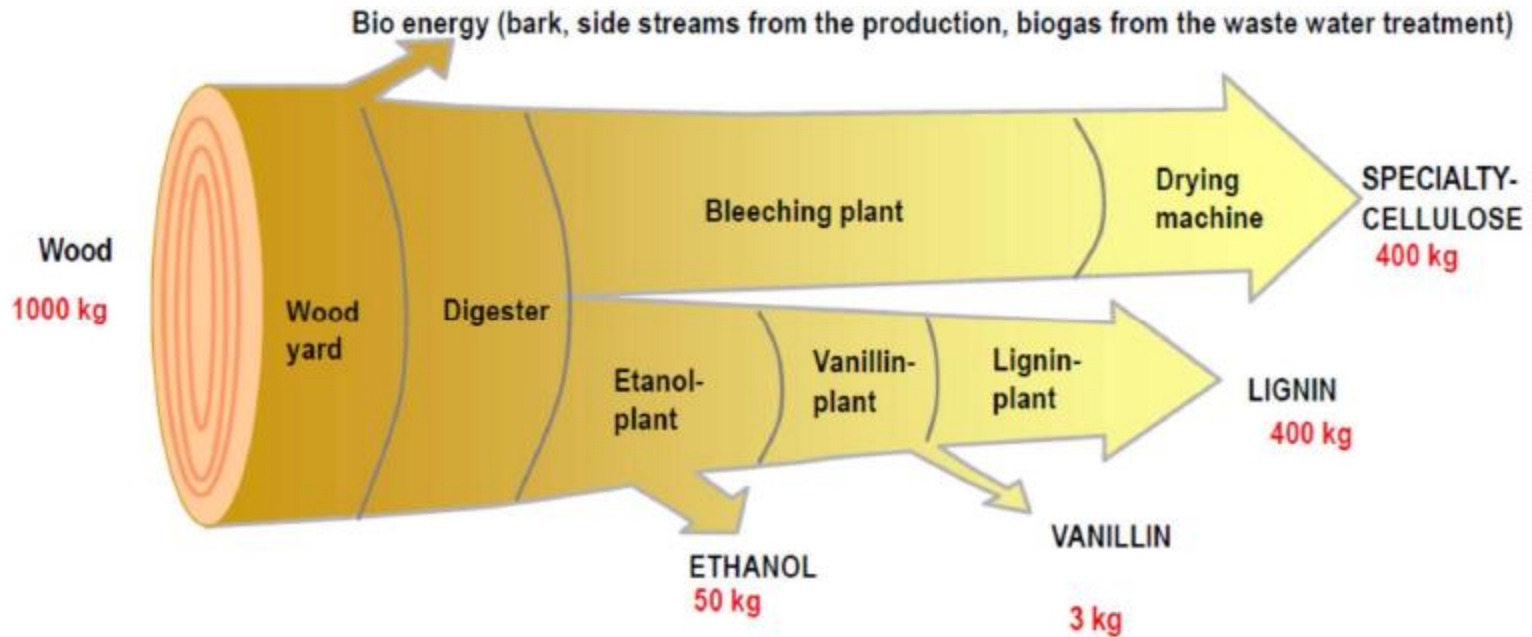
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Biorefinery





BIOMASS REFINING EXAMPLE

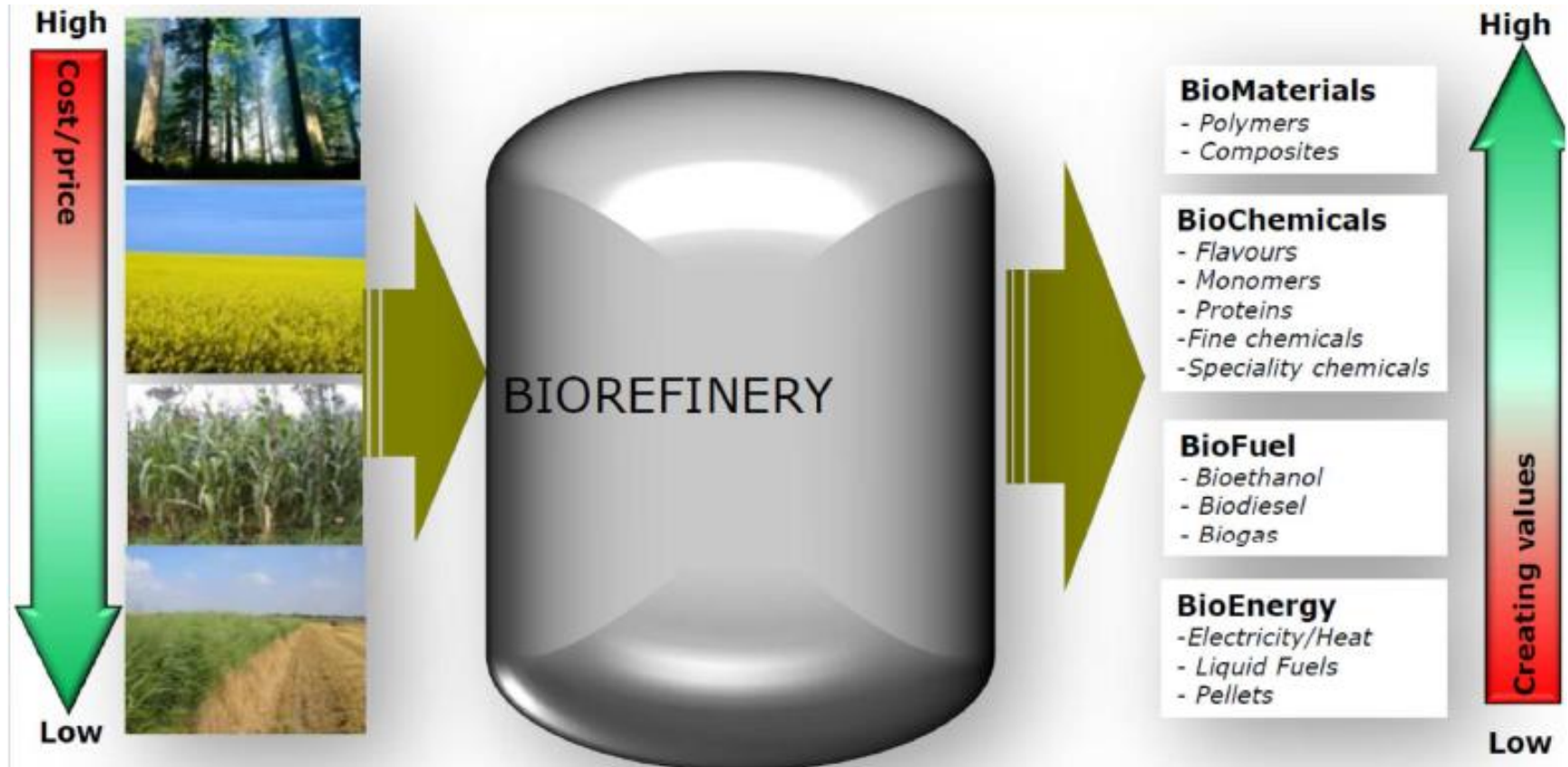




BIOREFINERY



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CATALYTIC PYROLYSIS OF LIGNIN FROM DIFFERENT SOURCES TO VALUABLE PHENOLS

D.R. NARON, F.X. COLLARD, L. TYHODA, AND J. F. GÖRGENS
STELLENBOSCH UNIVERSITY, WESTERN CAPE, SOUTH AFRICA

TAPPSA NATIONAL CONFERENCE AND EXHIBITION 2016
21 & 22 SEPTEMBER, UNITE SCHOOL OF ENGINEERING UKZN,
DURBAN, SOUTH AFRICA





Biorefinery



- Enzymatic volarisation of lignin:
- ✓ Alternative paths towards green chemicals and coatings
- Prof Johann Görgens
- Francois Minnaar



MANUFACTURERS ASSOCIATION
OF SOUTH AFRICA (PAMSA)



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Wood composites





Wood composites



- Phosphate bonded wood composite products
- Prof Martina Meincken
- Stephen Amiandamhen





Wood composites

- Formaldehyde free resins from *Irvingia gabonensis* and *Irvingia wombulu*
- Prof Martina Meincken
- Abi Alawode





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Wood preservation





Wood preservation

- Influence of wood properties on the treatability of *E. grandis*
- Prof Martina Meincken
- Gabriel Motsatsi





Closing comments

- We truly appreciate the support and that the industry is giving us



Thank you

PAPER

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