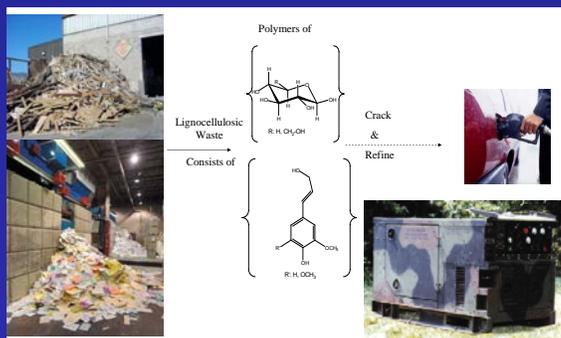


ABSTRACT

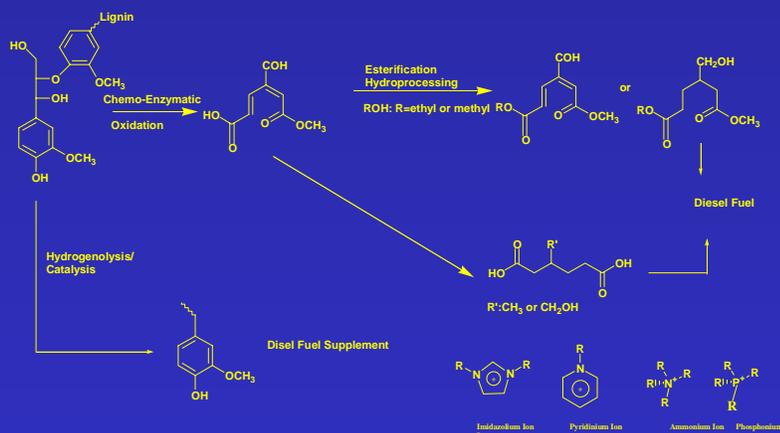
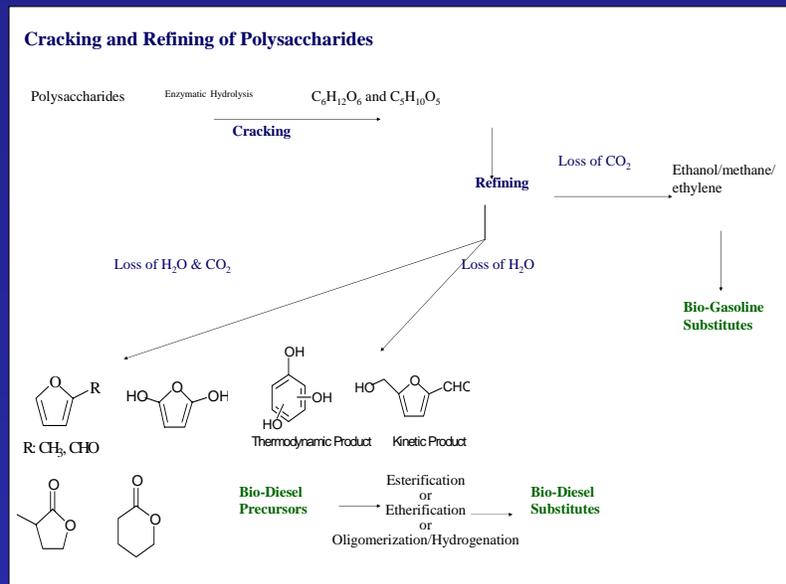
This poster examines the potential of utilizing waste paper/wood as a practical resource for generating JP8 diesel fuel.

OPPORTUNITY

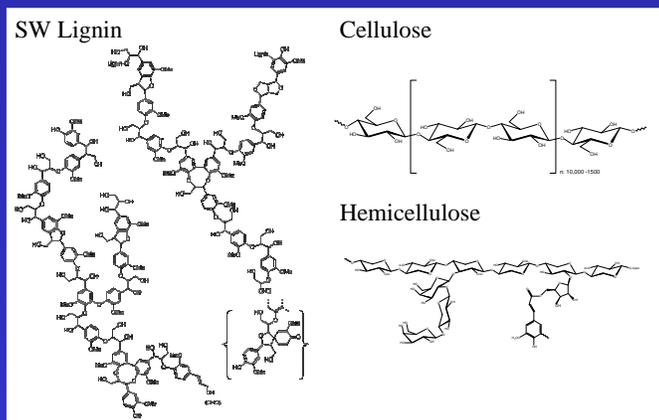
- Current soldier generated waste requires energy, equipment, and manpower for remediation
- Conversion of waste to JP8 diesel fuel would power critical mission equipment
- Substantial amounts of waste is lignocellulosic consisting of paper and fiberboard
- New chemo-enzymatic technologies required to crack and refine lignocellulosics to biodiesel fuel



CHEMO-ENZYMATIC CRACKING & REFINING LIGNOCELLULOSICS



Feedstocks



Major Chemical Components of Wood and Waste Paper

Resource	Lignin	Hemicellulose	Cellulose
Softwood Fiberboard	28%	17%	45%
Hardwood Fiberboard	20%	25%	45%
Newsprint	28%	17%	45%
Fine Paper	--	20%	80%

PROJECTED BENEFITS

- New Energy Resource from Waste
- Ability to convert local wood and agro materials into fuel
- Greater force flexibility and regional independence with respect to energy/power
- Reduced manpower/equipment resources directed towards waste maintenance

Wood Chemistry at IPST

- Leaders in lignocellulosic chemistry
- Extensive experience in lignin/polysaccharide fragmentation and derivatization
 - Chemical
 - Enzymatic
- State-of-art facilities for characterization of lignocellulosics
 - NMR
 - UV/Vis/Nir
 - MW

