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

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

Feedstocks

<table>
<thead>
<tr>
<th>Major Chemical Components of Wood and Waste Paper</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
<tr>
<td>Softwood Fiberboard</td>
</tr>
<tr>
<td>Hardwood Fiberboard</td>
</tr>
<tr>
<td>Newsprint</td>
</tr>
<tr>
<td>Fine Paper</td>
</tr>
</tbody>
</table>

Wood Chemistry at IPST
• Leaders in lignocellulosic chemistry
• Extensive experience in lignin/polsaccharide fragmentation and derivatization
  • Chemical
  • Enzymatic
• State-of-art facilities for characterization of lignocellulosics
  • NMR
  • UV/Vis/Nir
  • MW