

# A novel integrated process for biofuels and chemicals from cellulosic biomass

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## FULL DESCRIPTION

In the conventional biological platform for fuel and chemical production from cellulosic biomass, sugars are usually produced as a hydrolysis product and fermentation substrate for further conversion to biofuels. Two of the predominant contributors to the high processing cost for biofuel are the high pretreatment cost, in terms of time, raw materials, and heat energy, and the high cost of adding cellulase.

Researchers at the University of California, Davis, have developed a novel integrated biorefinery process, which features a unique, integrated pretreatment step and eliminates the need for cellulase addition while also lowering the time and energetic cost associated with conventional pretreatment.

## APPLICATIONS

- Used in converting cellulosic biomass to biofuel

## FEATURES/BENEFITS

- Low cost pretreatment process
- No need for cellulase addition
- Novel integration of pretreatment and fermentation

## PATENT STATUS

Patent Pending

## CONTACT

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## INVENTORS

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## OTHER INFORMATION

### KEYWORDS

biofuel, pretreatment,  
cellulase

### CATEGORIZED AS

- **Biotechnology**
  - Industrial/ Energy
- **Energy**
  - Bioenergy
- **Materials & Chemicals**
  - Chemicals

### RELATED CASES

2018-498-0

## ADDITIONAL TECHNOLOGIES BY THESE INVENTORS

- [Novel Catalysts for Use in Direct Production of Sugar Acids and Sugar Oligomers from Cellulosic Biomass](#)