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**Production of bioethanol and chemicals from oil palm empty fruit bunch by bisulfite process**Jian Zhao<sup>1</sup>, Liping Tan<sup>1</sup>, Hongxing Li<sup>1</sup>, Xuezhi Li<sup>1</sup>, Yinbo Qu<sup>1</sup>, Yuen May Choo<sup>2</sup>, Soh Kheang Loh<sup>2</sup><sup>1</sup>Shandong University, China<sup>2</sup>Malaysian Palm Oil Board, Malaysia

Bisulfite process was used to fractionate Oil Palm EFB (Empty Fruit Bunch) for production of bioethanol and chemicals for achieving biorefinery. Firstly, the EFB was fractionated to solid components and liquor components by bisulfite process, then, the solid components were used for bioethanol production by quasi-simultaneous saccharification and fermentation (Q-SSF) process, and the liquor components were converted to furfural by hydrolysis with sulfuric acid. Preliminary results showed that 95% of theoretical conversion of cellulose to ethanol was obtained, and the concentration of furfural was highest about 18.8 g/L with 0.75% sulfuric acid and the reaction time of 25 min, as well as the conversion of xylose to furfural was about 82.5%. It was also shown that the liquor components could be fractionating into hemicellulose sugars and lignin by resin separation for producing potential chemicals, for example: xylose, xylooligosaccharide, and lignosulfonate.

**Biography**

Jian Zhao is working at Shandong University, China

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