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Influence of phosphorous based additives on ash melting characteristics during combustion of biomass briquette fuel

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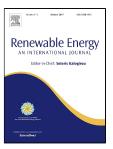
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#### **ACCEPTED MANUSCRIPT**

### 1 Influence of phosphorous based additives on ash melting

#### 2 characteristics during combustion of biomass briquette fuel

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- 8 Nomenclature
- 9 M<sub>ar</sub> Moisture
- 10 A<sub>ar</sub> Ash
- 11 FC<sub>ar</sub> Fixed carbon
- 12 V<sub>ar</sub> Volatile
- 13 MS Maize straws
- 14 CS Cotton stalks
- 15 ADP Ammonium dihydrogen phosphate, NH<sub>4</sub>H<sub>2</sub>PO<sub>4</sub>
- 16 CPM Calcium phosphate monobasic, Ca(H<sub>2</sub>PO<sub>4</sub>)<sub>2</sub>
- 17  $\varphi$  Ratio of the mass yield, %
- $m_1$  Mass of the initial briquette, mg
- $m_2$  Mass of the solid residual, mg
- 20  $\eta$  Potassium fixed ratio, %
- 21  $\omega_1$  Content of the potassium in the initial sample, %
- 22  $\omega_2$  Content of the potassium in the residual ash, %
- 23  $\beta$  Changing rate of the potassium fixed ratio, %

24

25 Abstract

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