

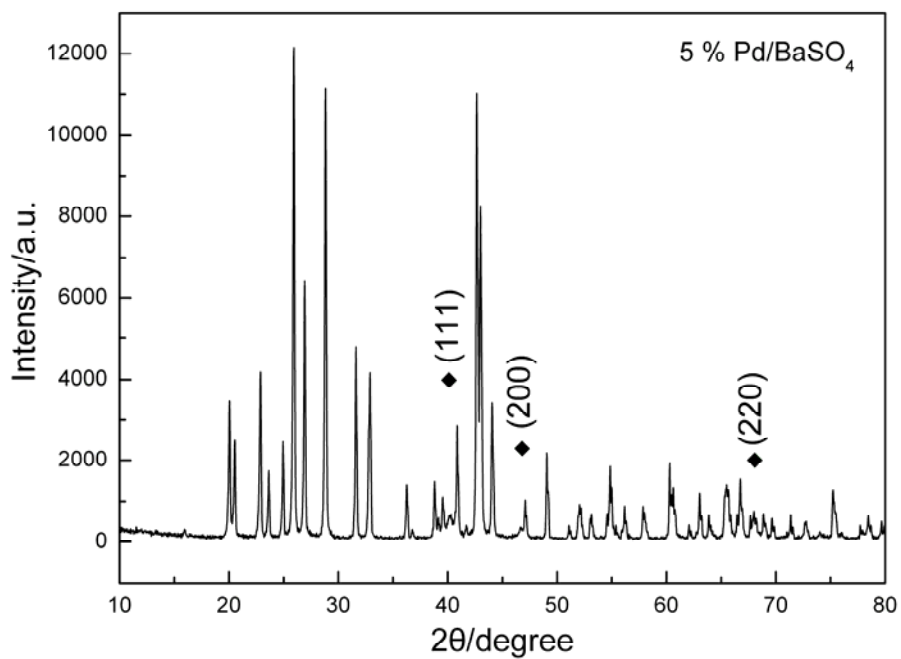
## **Electronic Supplementary Information ( ESI )**

### **Palladium-catalyzed decarboxylation of higher aliphatic esters: Towards a new protocol to the second generation biodiesel production**

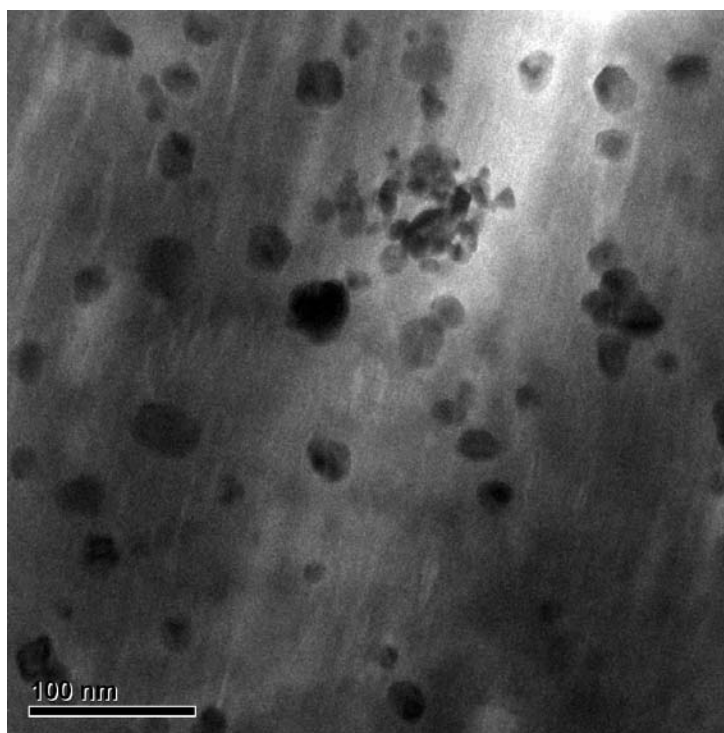
Junxing Han, Hui Sun, Yuqi Ding, Hui Lou\* and Xiaoming Zheng

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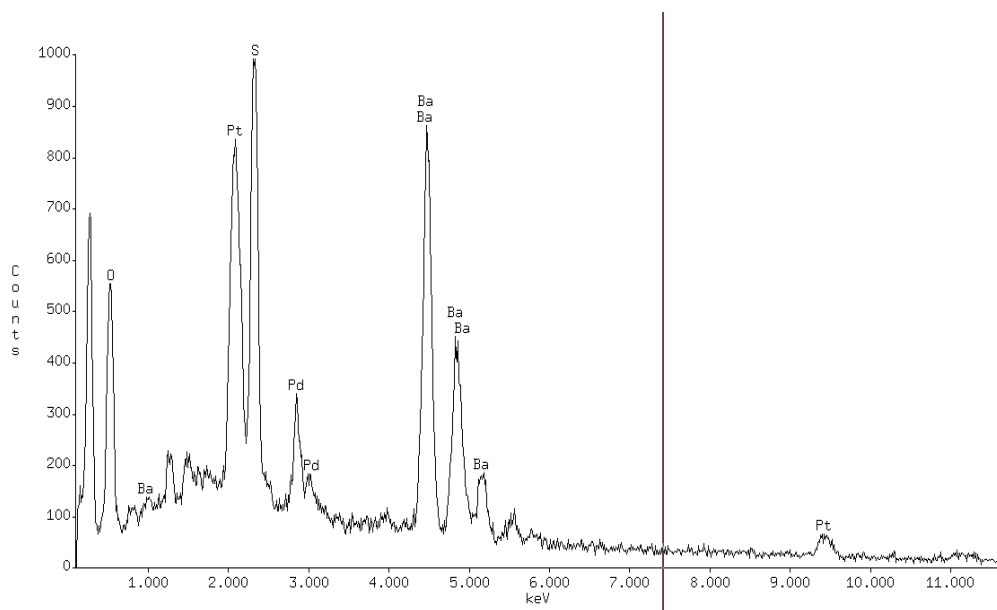
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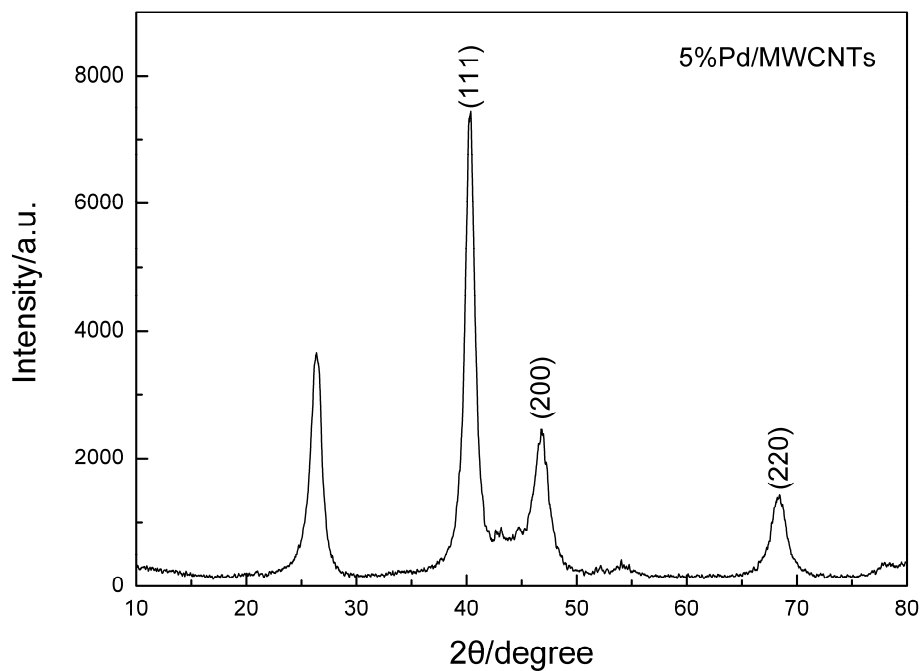
**Fig. SI1** XRD pattern of freshly prepared 5%Pd/BaSO<sub>4</sub>



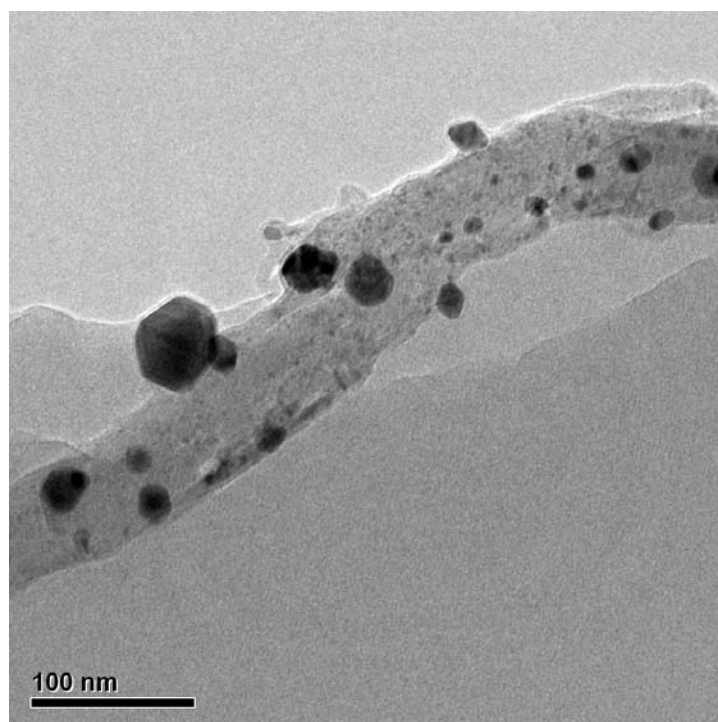
**Fig. SI2** TEM image of freshly prepared 5%Pd/BaSO<sub>4</sub>



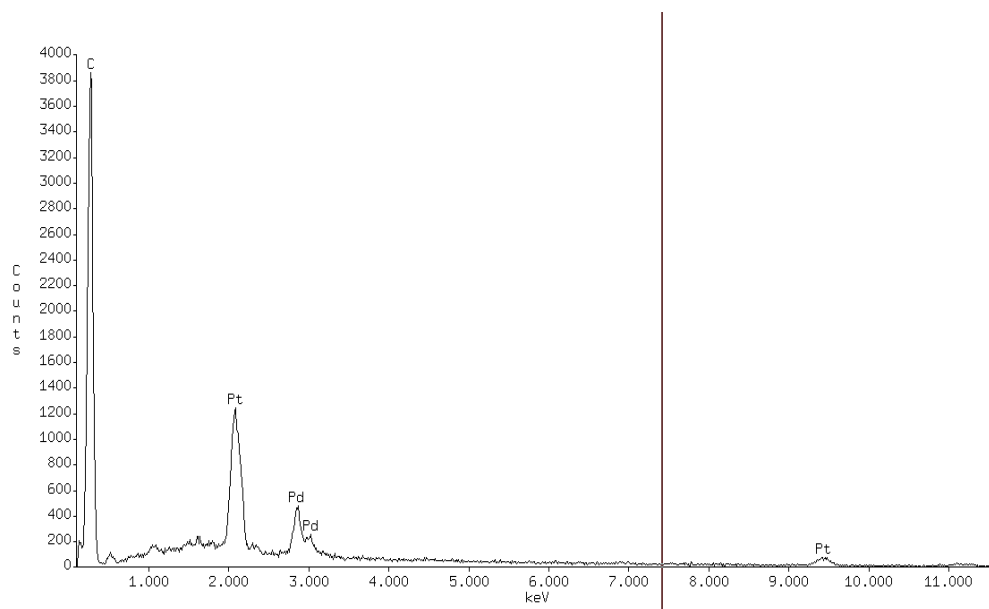
**Fig. SI3** EDS pattern of freshly prepared 5%Pd/BaSO<sub>4</sub>



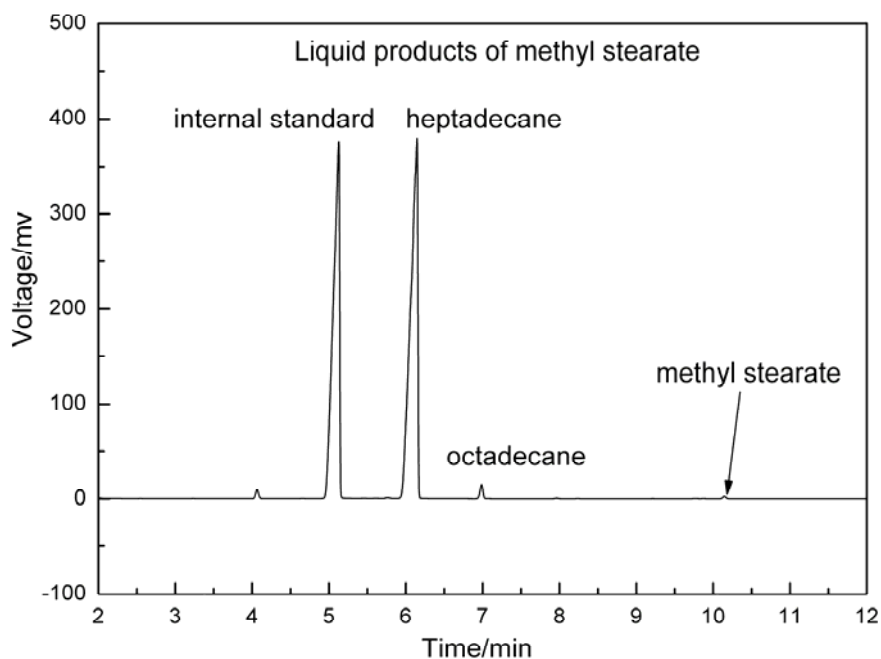
**Fig. SI4** XRD pattern of freshly prepared 5%Pd/MWCNTs



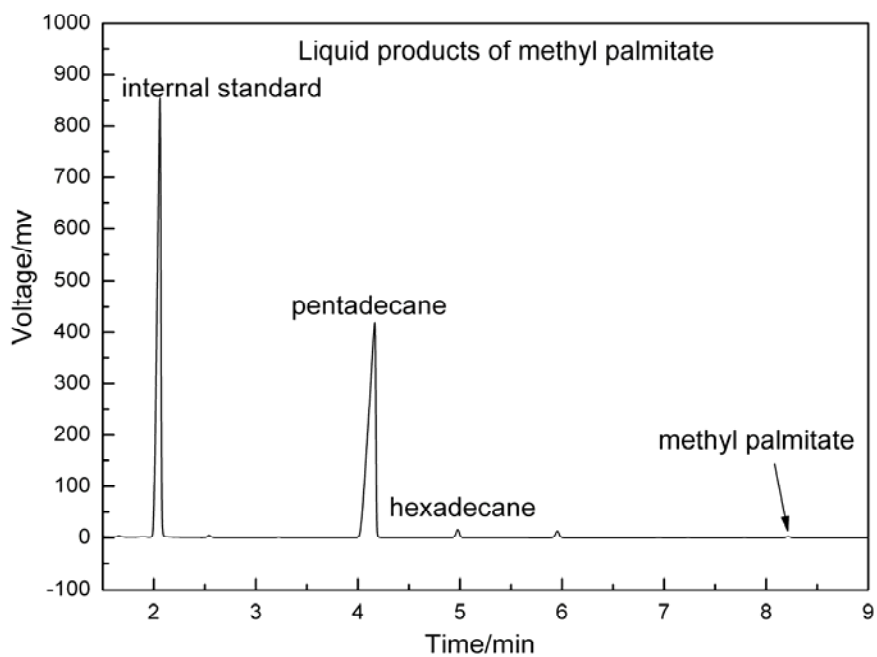
**Fig. SI5** TEM image of freshly prepared 5%Pd/MWCNTs



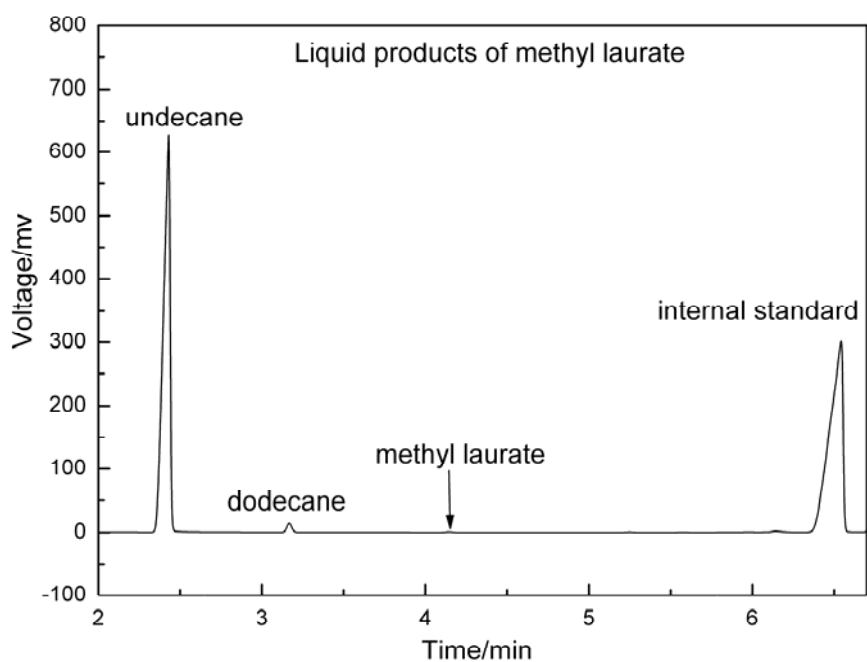
**Fig. SI6** EDS pattern of freshly prepared 5%Pd/MWCNTs



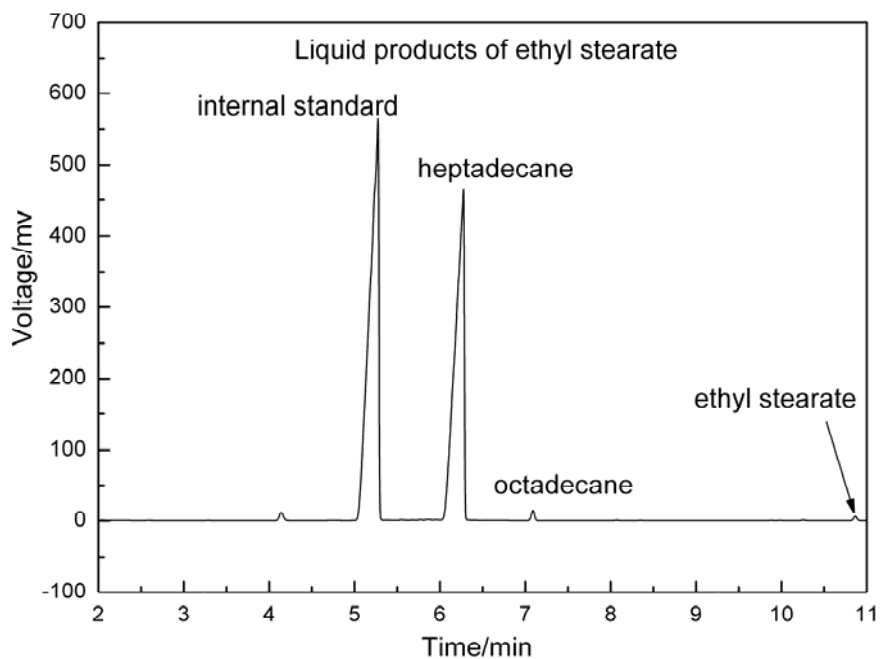
**Fig. SI7** GC result of methyl stearate liquid products



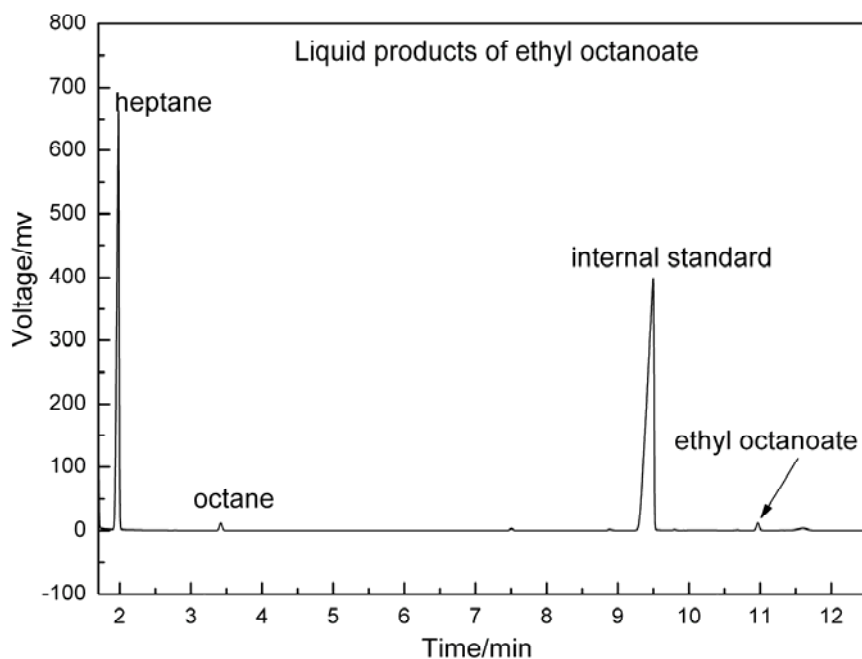
**Fig. SI8** GC result of methyl palmitate liquid products



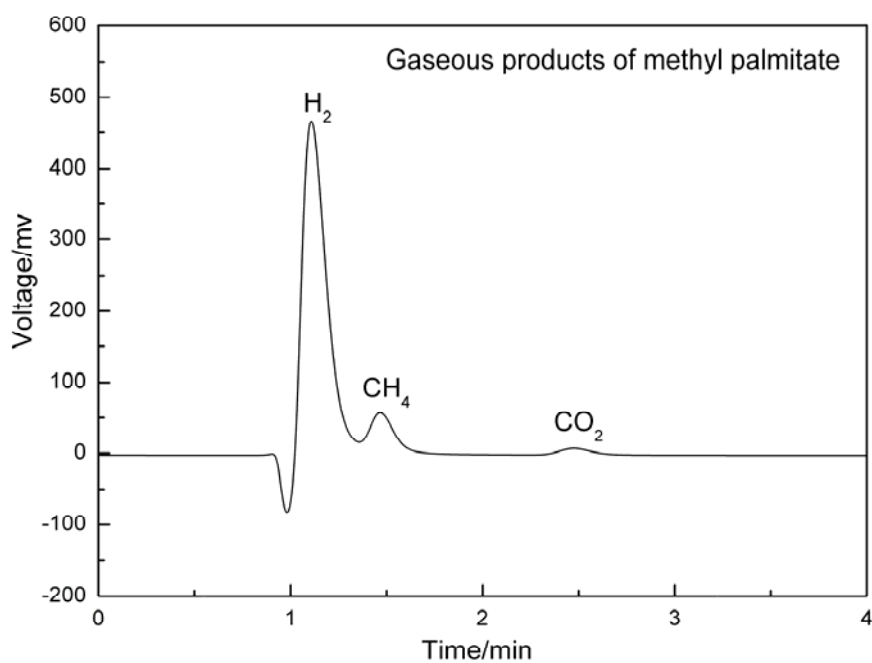
**Fig. SI9** GC result of methyl laurate liquid products



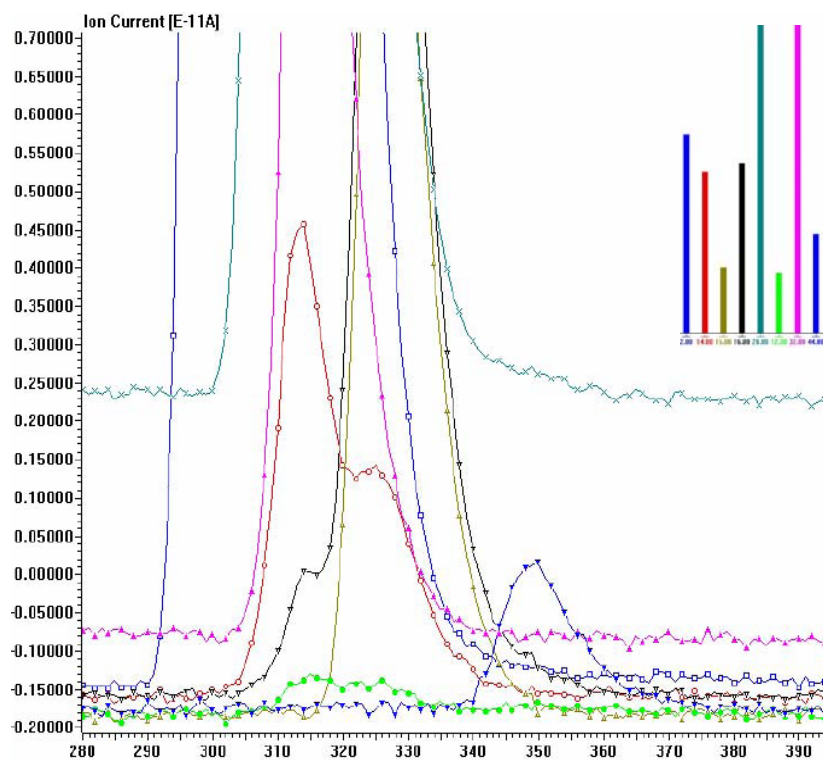
**Fig. SI10** GC result of ethyl stearate liquid products



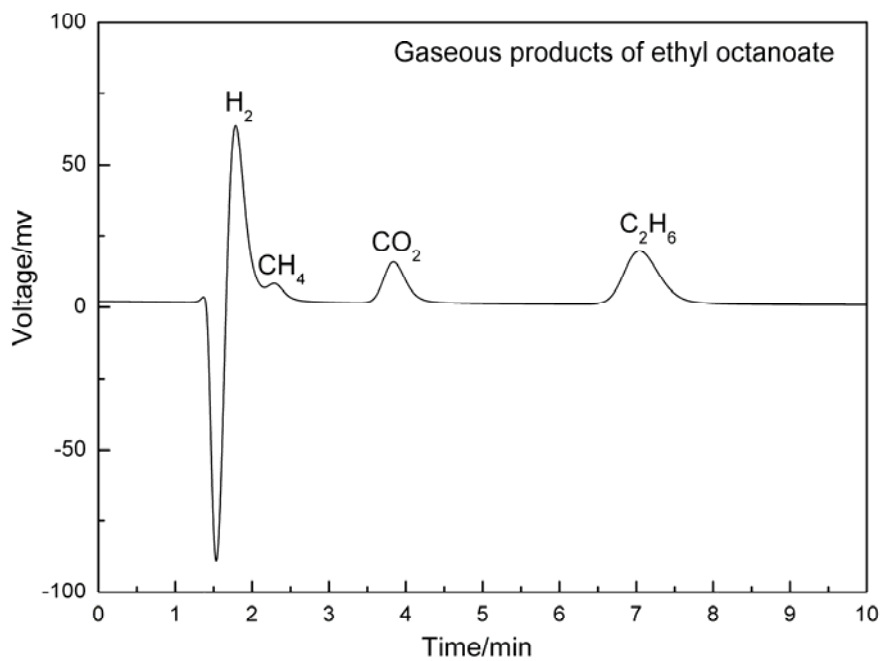
**Fig. SI11** GC result of ethyl octanoate liquid products



**Fig. SI12** GC result of methyl palmitate gas products

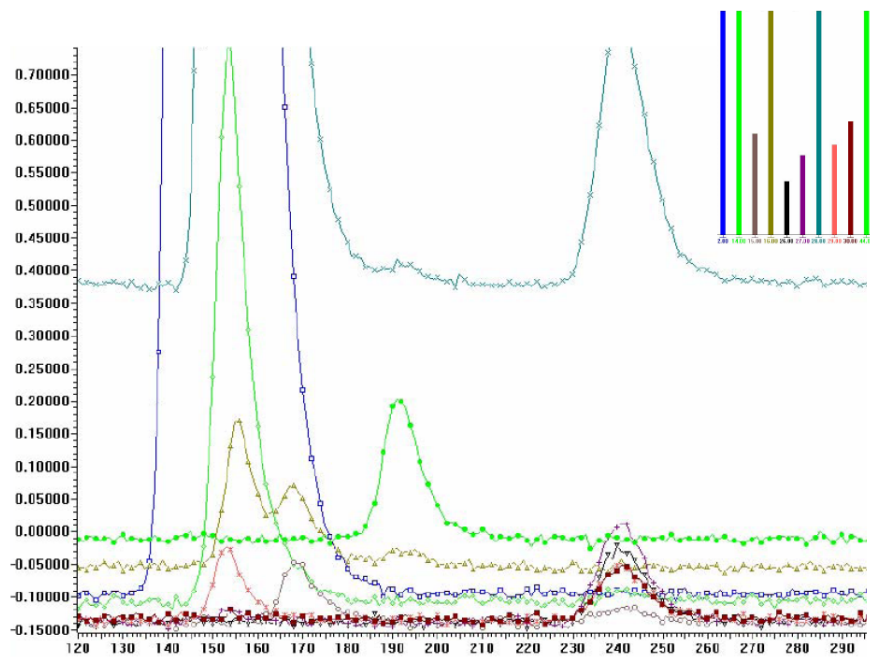


**Fig. SI13** GC-MS result of methyl palmitate gas products

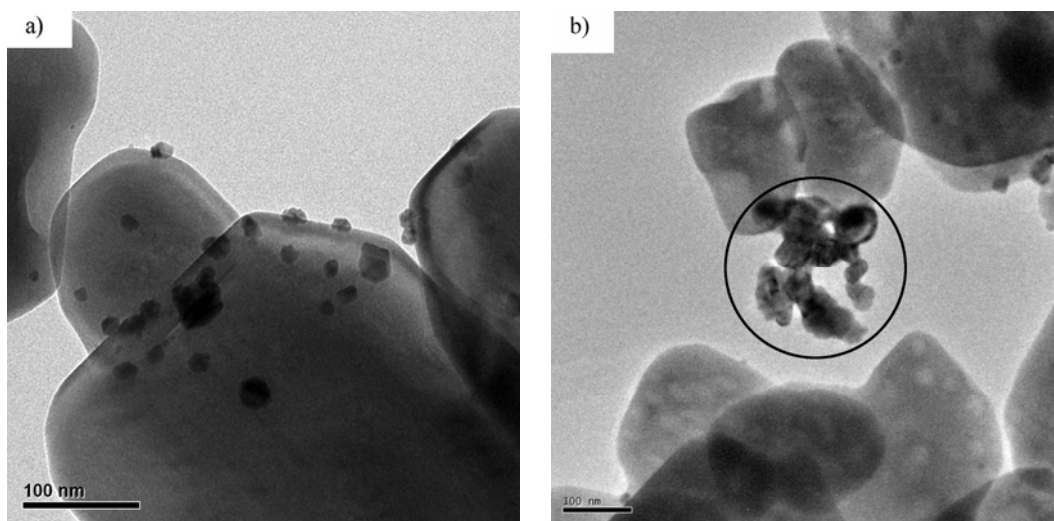


**Fig. SI14** GC result of ethyl octanoate gas products





**Fig. SI15** GC-MS result of ethyl octanoate gas products



**Fig. SI16** TEM images of 5%Pd/BaSO<sub>4</sub>: a) freshly prepared, b) used