

## Electronic Supplementary Information

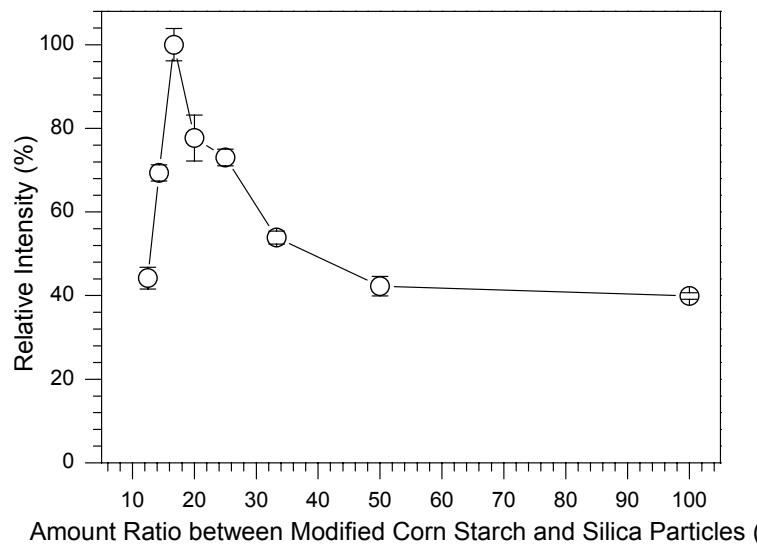
### **Silica Coated Paper Substrate: Development of and Its Application in Paper Spray Mass Spectrometry for Rapid Analysis of Pesticides in Milk**

**Qian Wang, Yajun Zheng, Xiaoling Zhang, Xiaoxiao Han, Teng Wang, and Zhiping Zhang\***

School of Chemistry and Chemical Engineering, Xi'an Shiyou University, Xi'an 710065, China

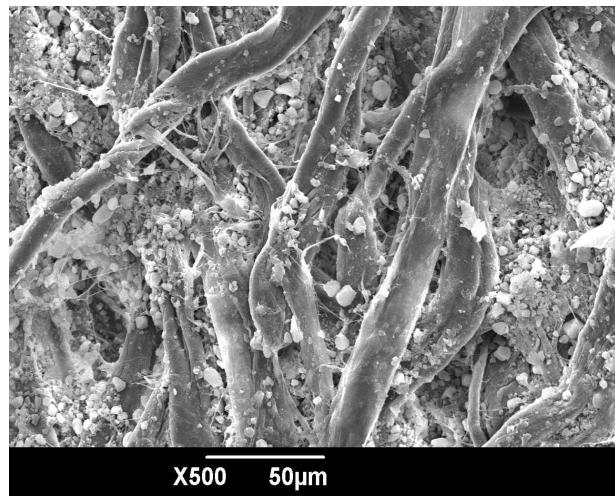
\*Corresponding author.

[zhangzp0304@gmail.com](mailto:zhangzp0304@gmail.com) (Z.Z.)

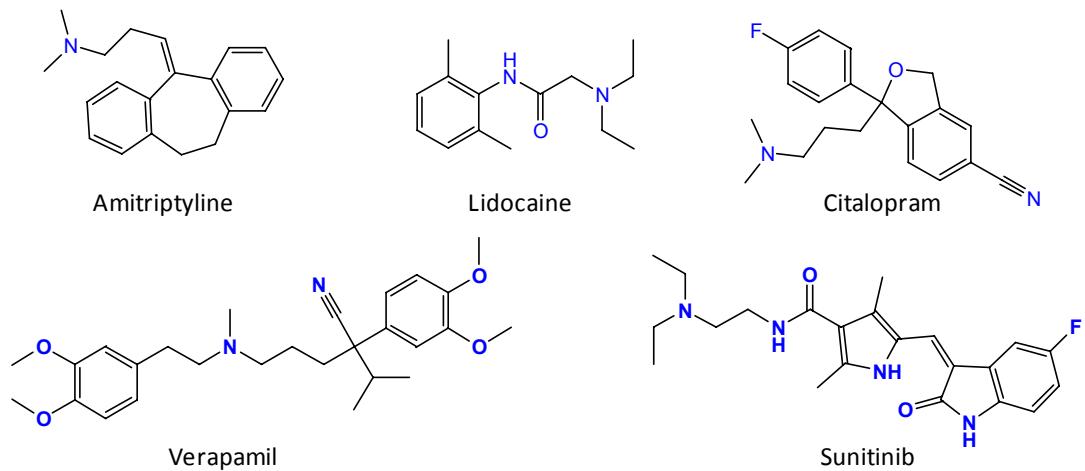


**Figure S1.** Effect of the amount ratio between the modified corn starch and silica particles on the obtained paper performance.

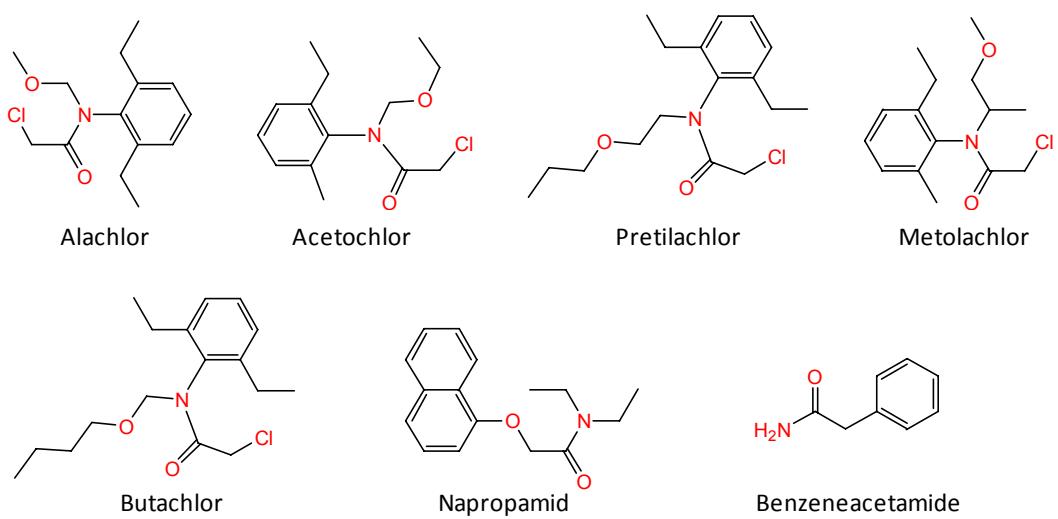
**Note:** The solution volume for coating was 100 mL, and the evaluation was based on the analysis of  $1 \mu\text{g mL}^{-1}$  metolachlor  $[(\text{M} + \text{H})^+, \text{m/z } 284]$ , product ion,  $\text{m/z } 252$  in milk by using paper spray mass spectrometry (spray solvent: 9:1 methanol/water; applied voltage: 3.5 kV).



**Figure S2.** SEM image of commercial silica coated paper (grade SG81 paper).



**Figure S3.** Structures of therapeutic drugs used in the reference (*Anal. Chem.* **2011**, *84*, 931-938)



**Figure S4.** Structures of pesticides used in the present study