

Supporting Information for

**Graphene/polyaniline electrodeposited needle trap device for the
determination of volatile organic compounds in human exhaled
breath vapor and A549 cell**

Yu Li, JingHong Li, Hui Xu*

Key Laboratory of Pesticide & Chemical Biology, Ministry of Education, Institute of
Environmental Chemistry, College of Chemistry, Central China Normal University,
Wuhan, 430079, China

Correspondence: Hui Xu, Ph D, Key Laboratory of Pesticide & Chemical Biology,
Ministry of Education, College of Chemistry, Central China Normal University,
Wuhan, 430079, People's Republic of China

Email: huixu@mail.ccnu.edu.cn

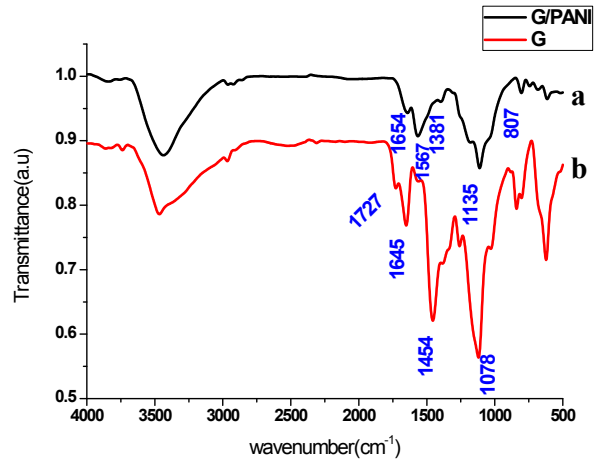


Figure S1. FTIR spectra of graphene and the electrodeposited G/PANI coating.

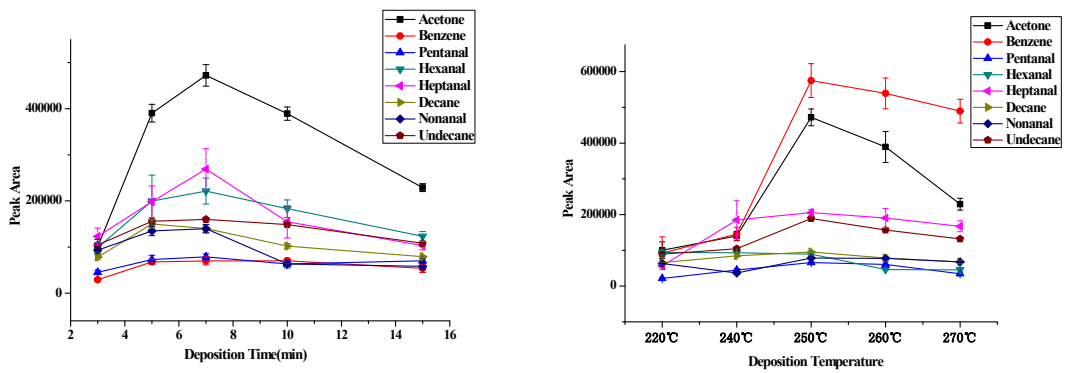


Figure S2. Selection of desorption conditions. (A) Desorption time, (B) Desorption temperature. Standard aldehydes solution: $2 \mu\text{g L}^{-1}$.

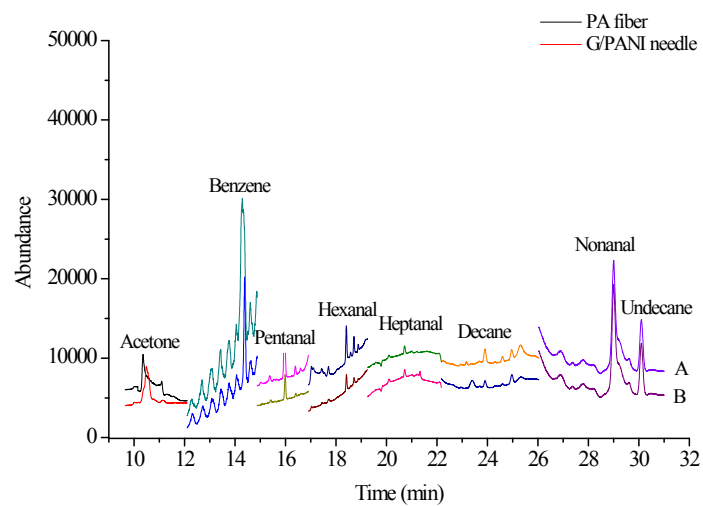


Figure S3. GC-MS-SIM Chromatograms of VOCs in EBV samples of lung cancer patient extracted by two sorbents (A: PA SPME fiber, B: G/PANI needle).