

Supplementary information

Quantitative detection of crystal violet using a surface-enhanced Raman scattering based on flower-like HAp/Ag nanocomposite

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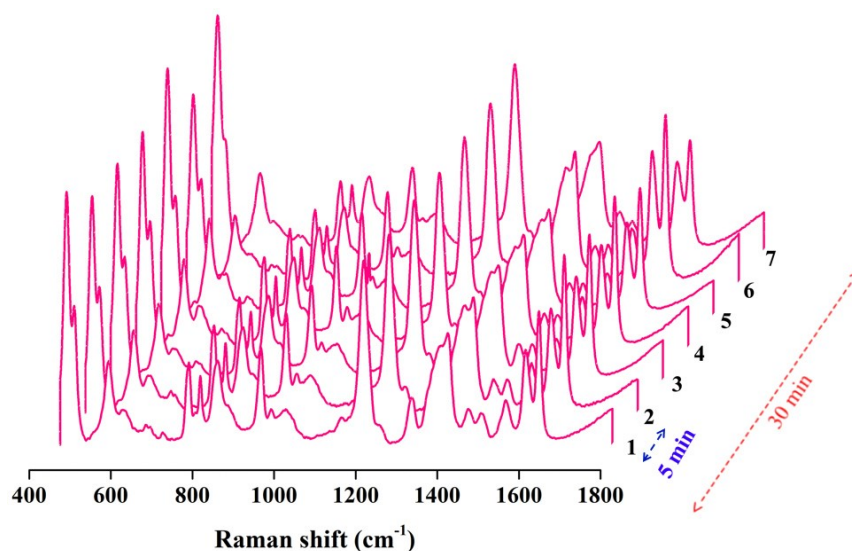


Fig. 1. Time-resolved SERS spectra recorded at 5 min intervals on the same CV sample using HAp/Ag substrate. Each spectrum was obtained under the condition of 785 nm wavelength, 10 s exposure time and 2 mW incident laser power.

Table S1. Comparison of the HAp/Ag nanocomposite-based SERS with other methods for detection CV.

Methods	High sensitivity	Low cost	Fast detection	References
(AuNPs/P2VP) composite microgels	√	×	×	1
ZnO@Au nanorods	√	×	×	2
Micro-cloud point extraction	√	×	√	3
Our method (HAp/Ag nanocomposite)	√	√	√	

References

- 1 H. Chen, T. You, L. Jiang, Y. Gao and P. Yin, *RSC Adv.*, 2017, **7**, 32743-32748.
- 2 L. Xu, H. Zhang, Y. Tian, A. Jiao, F. Chen and M. Chen, *Talanta*, 2019, **194**, 680-688.
- 3 E. Ghasemi and M. Kaykhaii, *Spectrochim. Acta. A.*, 2016, **164**, 93-97.