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Title: Detect, Remove: A New Paradigm in Sensing and Removal of PCBs from reservoir soil via SERS-Active ZnO triggered gold nanocomposites

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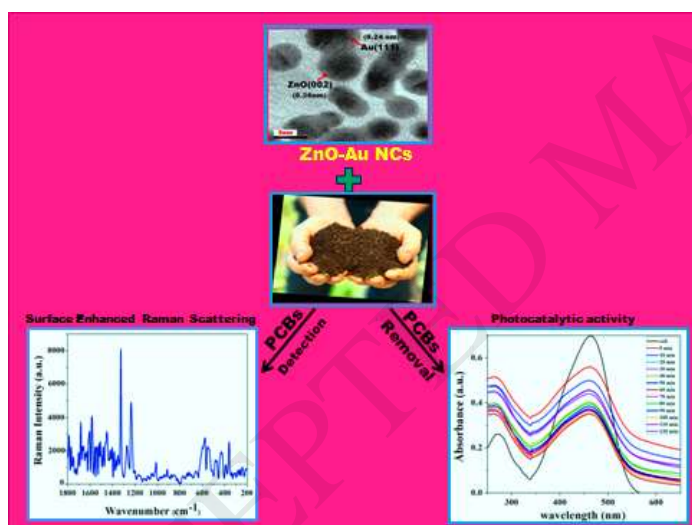
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Graphical Abstract



Highlights:

- Highly selective hot spots of ZnO-Au NCs were synthesized.
- PCB isomers were detected by SERS with ZnO-Au NCs substrate on reservoir soil.
- Isomers of tetrachlorobiphenyl were detected even at 6 mM.
- Photocatalytic degradation of PCBs in reservoir soil was seen under UV irradiation.
- The apparent rate constant of the catalytic reaction was 0.021/min.

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