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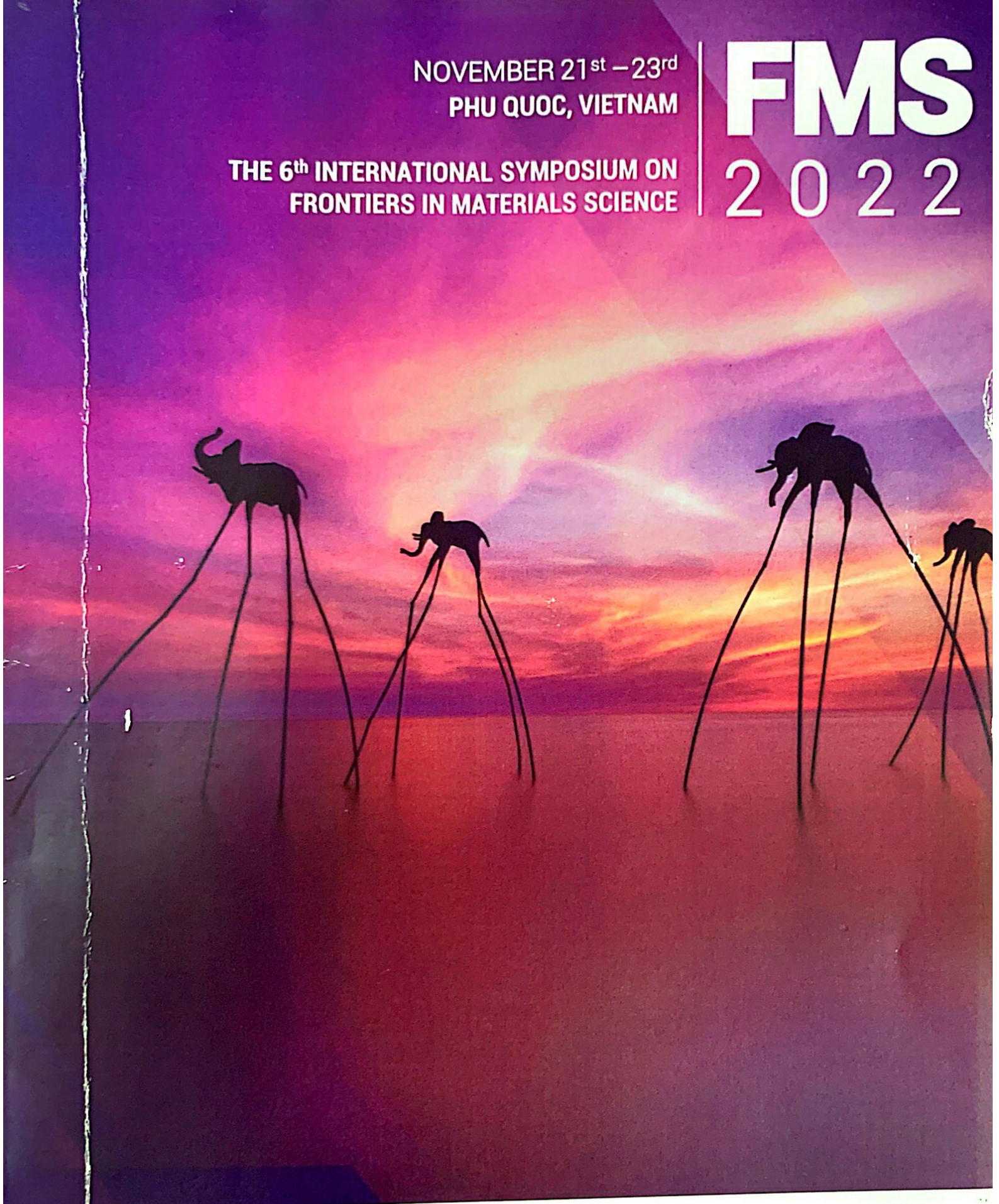

ABSTRACT BOOK

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ĐHQGHN

ĐẠI HỌC CÔNG NGHỆ

Session: Photonics and Hybrid Materials (PH)

PH-O01 - PH-O05

PH-O01 (Oral)

Boosting surface enhanced Raman scattering from ZnO/Au nanorods by UV excitation

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Surface-enhanced Raman spectroscopy (SERS) has attracted much interest from scientists and engineers because of its potential applications in detection of environmental pollutants, explosives and biomolecules at trace levels. Recently, Photo Induced Enhanced Raman scattering (PIERS) has been reported as a novel technique to further intensify SERS signal under excitationby suitable light prior to or during Raman measurement. In this research, ZnO nanorods were first prepared by galvanic assisted hydrothermal method. Sputtering technique was then applied to fabricate ZnO/Au nanorods. The study showed that Raman signal can be boosted up to 30 times by in situ UV-excitationcompared with traditional SERS measurement. This approach provides a robust, fast technique for detection of substances at low concentration.

Keywords: ZnO/Au nanorod; hydrothermal; galvanic; SERS; UV excitation.

References

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