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Dual-modality endoscopic probe for tissue surface shape reconstruction and hyperspectral imaging enabled by deep neural networks

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Highlights

- Simultaneous endoscopic tissue surface 3D reconstruction and hyperspectral imaging
- Miniaturized fiber-optic probe compatible with endoscope biopsy channels
- Real-time and robust tissue surface 3D reconstruction
- Accurate dense hyperspectral estimation from sparse data with deep learning
- Simultaneous display of color, tissue shape, narrow band, oxygen saturation images

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