2026 IEEE 5th International Conference on Micro/Nano Sensors for AI, Healthcare, and Robotics (NSENS 2026)

Chengdu, China
24-27 April 2026

IEEE Catalog Number: CFP26S44-POD
ISBN: 979-8-3195-4437-7

IEEE Advancing Technology for Humanity

Copyright © 2026, IEEE

All Rights Reserved

Copyright and Reprint Permissions:

Abstracting is permitted with credit to the source. Libraries are permitted to photocopy beyond the limit of U.S. copyright law for private use of patrons those articles in this volume that carry a code at the bottom of the first page, provided the per-copy fee indicated in the code is paid through Copyright Clearance Center, 222 Rosewood Drive, Danvers, MA 01923.

For other copying, reprint or republication permission, write to IEEE Copyrights Manager, IEEE Service Center, 445 Hoes Lane, Piscataway, NJ 08854. All rights reserved.

*** This is a print representation of what appears in the IEEE Digital Library. Some format issues inherent in the e-media version may also appear in this print version.

IEEE Catalog Number:	CFP26S44-POD
ISBN (Print-On-Demand):	979-8-3195-4437-7
ISBN (Online):	979-8-3195-4436-0

Additional Copies of This Publication Are Available From:

Curran Associates, Inc
57 Morehouse Lane
Red Hook, NY 12571 USA

Phone:	(845) 758-0400
Fax:	(845) 758-2633
E-mail:	curran@proceedings.com
Web:	www.proceedings.com



TABLE OF CONTENTS

Electrochemical Monitoring Based on High-Performance Organic Electrochemical Transistors 1
Xuhan Chen, Haozhe Liu, Yuxuan Hu, Yirui Fu, Qingru Yang, Ding Zheng, Junsheng Yu

Highly Stretchable Organic Electrochemical Transistors Enabled by Crack-Repaired Gold Nanowire Electrodes for Wearable ECG Sensing 5
Haihong Guo, Ding Zheng, Junsheng Yu

Impact of PVA-Assisted Orthogonal Lithography and PAA Doping on the pH-Responsive Logic Gating of PEDOT: PSS OECTs 10
Tianxiang Li, Ding Zheng, Junsheng Yu

A Broadband Photo-Response Biomimetic Optoelectronic Synapse with Ultra-Low Operating Voltages 15
Haozhe Liu, Ding Zheng, Junsheng Yu

Evolving Nanorobots in Nonstationary Biological Landscapes 19
Weiqi Liu, Shaolong Shi

Near-Infrared Bulk Heterojunction Organic Photodetectors with High Detectivity and Ultra-Low Noise Current for Biometric Monitoring 25
Qiao Luo, Taiyu Li, Ding Zheng, Junsheng Yu

Scalable PVDF-TiO_2 Wet-Spun Passive Radiative Cooling Textile for Wearables Applications 29
Lung Chow, Wenkang Qu, Xinge Yu

Interfacial Polymer Engineering Stabilizes Fading Memory in Perovskite Optoelectronic Reservoirs 34
Lunyao Pan, Ding Zheng, Junsheng Yu

An Integrated Electrical Stimulation-Iontophoresis System with sEMG Feedback for Enhanced Tendon Repair and Intelligent Monitoring 38
Bo Rui, Yunlong Zhou, Xiang Guo, Chengyu Zhuang, Lihai Zhang, Qingfubo Geng, Binghao Xu Chunxiu Liu

Effect of Solvent Post-Treatment on the Performance of PEDOT:PSS-Based Organic Electrochemical Transistors 44
Xinru Sun, Ding Zheng, Junsheng Yu

Chitosan-Insulated Zero-Bias Event-Driven Organic Photodiodes for Broadband Visible-to-Near-Infrared Detection 48
Shixiu Sun, Ding Zheng, Junsheng Yu

Zinc Hydroxide with a Wide Alkalinity Window Enables High-Performance $CsPbI_3$ Perovskite Light-Emitting Diodes 53
Zhennan Tian, Ding Zheng, Sai Bai, Junsheng Yu

A 32-Gb/S 0.57-Pj/B ILO-Based NRZ Transmitter with Edge-Boosting 3-Tap FFE in 28-Nm CMOS 57
Yiming Wang, Xuewu Li, Yize Wang, Mushen Shen, Cenyue Zhang, Huabo Sun

Laser Beam Angle Measurement Based on a Coma-Engineered Holographic Metasurface 62
Yijin Wang, Hao Wang, Shibin Jiang, Fengchi Xu, Shaowei He, Weiming Zhu

±80° Wide-Angle Beam Steering with Cascaded Metalenses for Long-Wave Infrared Scan Imaging 66
Fengchi Xu, Shibin Jiang, Zhirui Zeng, Yijin Wang, Kun Zheng, Yanbo Wen, Yu Huang, Weiming Zhu

Room-Temperature Low-Power MoS_2 Schottky Junction Hydrogen Sensor Based on Pd-Cu Alloy Optimization 72
Ruilin Yang, Dinghan Ma, Zhen Yuan, Huiling Tai, Weizhi Li

The Influence of Organic Channels on the Sensing Characteristics of Organic Electrochemical Transistors 77
Yupeng Yuan, Shuai Long, Jing Yang, Xiaofei Li, Songlin Liao, Shangzhi Li, Liyu Zhang

Bioinspired Two-Terminal P3HT: PCBM Optoelectronic Synapses for Emulating Retinal Perception and Memory Behaviors 81
Taiyu Li, Qiao Luo, Ding Zheng

Rule-Driven Self-Organized Swarm Delivery to Evolutionary Nanorobots 85
Jiawei Zou, Shaolong Shi

Impact of Gate Leakage on Trapping Characteristics of p-GaN Gate Power HEMTs Using the Transient Current Method 90
Yapeng Zhao, Haoyu Huang, Guoyu Quan, Chengyi Liu, You Li, Jiangfeng Du