

---

# **Biosensors and Nanoscale Measurements: A Symposium in Honor of Professors Nongjian Tao and Stuart Lindsay**

---

**Editors:**

**L. A. Nagahara**

**E. Forzani**

**C. Li**

**T. Thundat**

**N. N. Wu**

**Sponsoring Division:**



**Sensor**



Published by  
The Electrochemical Society  
65 South Main Street, Building D  
Pennington, NJ 08534-2839, USA  
tel 609 737 1902  
fax 609 737 2743  
[www.electrochem.org](http://www.electrochem.org)

**ecs**transactions™

**Vol. 104, No. 12**

---

Copyright 2021 by The Electrochemical Society.  
All rights reserved.

This book has been registered with Copyright Clearance Center.  
For further information, please contact the Copyright Clearance Center,  
Salem, Massachusetts.

Published by:

The Electrochemical Society  
65 South Main Street  
Pennington, New Jersey 08534-2839, USA

Telephone 609.737.1902

Fax 609.737.2743

e-mail: [ecs@electrochem.org](mailto:ecs@electrochem.org)

Web: [www.electrochem.org](http://www.electrochem.org)

ISSN 1938-6737 (online)

ISSN 1938-5862 (print)

ISBN 978-1-60768-934-8 (PDF)

Printed in the United States of America.

---

***ECS Transactions, Volume 104, Issue 12***

Biosensors and Nanoscale Measurements: A Symposium in Honor of Professors Nongjian Tao  
and Stuart Lindsay

**Table of Contents**

<i>Preface</i>	<i>iii</i>
<b>Chapter 1</b> <b>Scanning Probe &amp; Nanoscale Measurements</b>	
<i>(Invited)</i> Humeral Bone Strength and Flight in Eumaniraptoran Dinosaurs <i>S. Lee, J. Thomas</i>	3
<b>Chapter 2</b> <b>Single Molecule, Nanoscale &amp; Surface Plasmon Measurements</b>	
<i>(Invited)</i> Plasma Assisted Enhancement in Optical and Electronic Properties of Metal Nanoparticles: Application in Electrochemical Biosensing <i>A. Sonawane, M. A. Mujawar, S. Bhansali</i>	21
<b>Chapter 3</b> <b>Biosensor Preanalytics &amp; Translation</b>	
<i>(Invited)</i> Breathable, Stimuli-Responsive, and Self-Sealing Chemical Barrier Material Based on Selectively Superabsorbing Polymer <i>T. Burgin, K. Rykaczewski, K. Manning, A. Phadnis, P. Kotagama, D. Simonet</i>	31
<i>(Invited)</i> New Advancements in Biosensor Technologies with Surface Plasmonic Resonance Microscopy <i>T. Jing, N. Ly</i>	51
Author Index	59