

---


# Materials, Devices, and Systems for Neuromorphic Computing and Artificial Intelligence Hardware

---

Editors:

D. Misra	V. Chakrapani	B. Yildiz
K. Kakushima	J. L. Blackburn	
R. Padmanabhan	G. Kolhatkar	

Sponsoring Divisions:

-  Dielectric Science and Technology
-  Electronics and Photonics
-  High-Temperature Energy, Materials & Processes
-  Nanocarbons

Interdisciplinary Science and Technology Subcommittee



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)

**EST**transactions™

Vol. 113, No. 14

---

Copyright 2024 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)

ISBN 978-1-62332-664-7 (PDF)

Printed in the United States of America.

---

***ECS Transactions, Volume 113, Issue 14***

Materials, Devices, and Systems for Neuromorphic Computing and Artificial Intelligence  
Hardware

**Table of Contents**

<i>Preface</i>	<i>iii</i>
<i>(Invited) Ferroelectric Nonvolatile Capacitive Synapse for Charge Domain Compute-in-Memory</i> <i>O. Phadke, T. H. Kim, Y. C. Luo, S. Yu</i>	3
Author Index	15