Special Issue

New Advances in Self-Catalysis Technology

Message from the Guest Editors

Recent years have seen a systematic shift from the catalyzed growth of NWs to a self-catalyzed growth approach to alleviate the detrimental effects of the catalyst, impacting subsequent device performance. Integration of these NWs on a variety of substrates during either synthesis or post-growth transfer of nanowires with an ability to recycle substrates and less material consumption has made this an attractive, cost-effective approach. As a result, the application of semiconductor NWs has broadened to a large field of interest ranging from simple optoelectronic devices to photonic integrated circuits, and single photon detection in quantum information science to automotive LIDAR. This Special Issue therefore aims to capture one small segment of this exciting field and is focused on the most recent progress and advances in the field of semiconductor nanowires grown by self-catalyzed epitaxy with emphasis on growth, modeling, fabrication of nanoscale optoelectronic devices, and applications thereof.

Guest Editors

Prof. Dr. Shanthi Iyer

Joint School of Nanoscience and Nanoengineering, North Carolina A&T State University, Greensboro, NC 27401, USA

Prof. Dr. Lew Reynolds

Department of Materials Science and Engineering, North Carolina State University, Raleigh, NC 27695, USA

Deadline for manuscript submissions

closed (31 December 2021)

Catalysts

an Open Access Journal by MDPI

Impact Factor 4.0
CiteScore 7.6

mdpi.com/si/56923

Catalysts
Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland
Tel: +41 61 683 77 34
catalysts@mdpi.com

mdpi.com/journal/catalysts

Catalysts

an Open Access Journal by MDPI

Impact Factor 4.0
CiteScore 7.6

mdpi.com/journal/catalysts

MDPI

About the Journal

Message from the Editor-in-Chief

Editor-in-Chief

Prof. Dr. Keith Hohn
Carl R. Ice College of Engineering, Kansas State University, Manhattan, KS, USA

Author Benefits

High Visibility:

indexed within Scopus, SCIE (Web of Science), Inspec, Ei Compendex, CAPlus / SciFinder, CAB Abstracts, and other databases.

Journal Rank:

JCR - Q2 (Chemistry, Physical) / CiteScore - Q1 (General Environmental Science)

Rapid Publication:

manuscripts are peer-reviewed and a first decision is provided to authors approximately 16.6 days after submission; acceptance to publication is undertaken in 2.7 days (median values for papers published in this journal in the first half of 2025).