# **Special Issue**

# Noble Metal Catalysts: Pioneering Breakthrough in Chemical Catalysis

## Message from the Guest Editor

Noble metal nanoparticles such as Pt, Pd, Rh, Au, Ag, Ir, Ru, and Os supported on alumina, silica, zirconia, titania, zeolites, and structured mesoporous materials have found applications as heterogeneous catalysts in several industrial processes such as petroleum refinery, environmental catalysis, exhaust emission control of stationery and motor vehicles, water purification, and the synthesis of fine and specialty chemicals. Furthermore, noble metal-modified catalytic materials, due to their acid and corrosion resistance properties, can also be applied as sensors, biomedicine products, antimicrobial actions, electronics, hydrogenations, and dehydrogenation reactions.

Noble metal nanoparticles' sizes, dispersions, oxidation states, acid sites, and meta-supporting interactions are highly influenced by the methods of catalyst preparation such as evaporation impregnation, co-precipitation, deposition precipitation, ion exchange, in situ synthesis, and chemical vapor deposition. Taking into consideration sustainable development initiatives, it is of immense importance that noble metal-modified catalysts are applied in the rational utilization of limited natural resources.

### **Guest Editor**

Dr. Narendra Kumar

Faculty of Science and Engineering, Laboratory of Industrial Chemistry and Reaction Engineering, Åbo Akademi University, Henriksgatan 2, Fl-20500 Turku, Finland

#### Deadline for manuscript submissions

15 March 2026



# **Catalysts**

an Open Access Journal by MDPI

Impact Factor 4.0 CiteScore 7.6



mdpi.com/si/233821

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



## **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).

