ACS Catalysis

EDITORIAL

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Welcome to ACS Catalysis

I am pleased to introduce the inaugural issue of *ACS Catalysis*, the new interdisciplinary catalysis journal published by ACS. With this first issue, *ACS Catalysis* now provides a home for research focused on catalysis within the ACS family of publications.

Catalysis is one of the oldest subdisciplines of chemistry, with over a century of chemical history permeated with exciting new advances in catalysis that have gone on to ignite science and society in immeasurable ways. Yet, interest in catalysis has not waned over time. In fact, owing to the broad impact of catalysis on both fundamental science and an array of emerging technologies, global interest in catalysis continues to accelerate. One can look back approximately 100 years and see that the science of that time was driven in part by important investigations relating to catalysis, with four Nobel Prizes awarded between 1907 and 1918 for advances in (i) fermentation; (ii) catalysis, equilibria and reaction rates; (iii) catalytic hydrogenation; and (iv) catalytic ammonia synthesis by Buchner; Ostwald; Sabatier; and Haber, respectively. In recent history, 4 of the last 10 Nobel Prizes in chemistry have been awarded for work related to catalysis, a pace of recognition unmatched in history. These recognitions include the work of Knowles, Noyori, and Sharpless in asymmetric catalysis (2001); Chauvin, Grubbs, and Schrock in olefin metathesis (2005); Ertl in surface chemistry (2007); and the most recent prize awarded to Heck, Negishi, and Suzuki for palladium-catalyzed cross couplings in organic synthesis (2010). Clearly, after 100+ years of study and development, catalysis remains an exciting and vibrant discipline.

The study of catalysis is practiced by chemists, biochemists, engineers, biologists, and physicists, and as a result, distinct subdisciplines within the broader catalysis field have developed. Three subfields include the traditional disciplines of homogeneous catalysis, heterogeneous catalysis, and biocatalysis. The *ACS Catalysis* editorial team includes experts in each of these areas, including T. Brent Gunnoe of the University of Virginia in homogeneous catalysis and Huimin Zhao of the University of Illinois, Urbana-Champaign in biocatalysis. My own work is focused primarily in heterogeneous catalysis. In addition, *ACS Catalysis* has an international, world-class Editorial Advisory Board with expertise in all key areas of catalysis research. Although each catalysis subdiscipline is represented by an editor who is an expert in the field, a modern trend in catalysis research is the blurring of these historical boundaries, with many studies at the forefront of catalysis involving concepts and approaches spanning different subdisciplines. To that end, *ACS Catalysis* will provide a venue for cross-cutting catalysis research, with an emphasis on contributions that describe catalytic molecules, macromolecules, or materials in fundamental, kinetic terms, utilizing catalytic site-based metrics such as turnover frequencies whenever possible, such that catalysts from all disciplines can be rigorously compared.

This inaugural issue is composed of both articles and letters, representing formats for the presentation of original research within *ACS Catalysis*. We will also publish perspectives, viewpoints, and reviews, providing authors with venues to describe and analyze a particular area of catalysis science from their perspective. All submissions will be reviewed in an expedient manner, leading to rapid publication of accepted papers in electronic form. Special recognition goes to the ACS Publications staff for their important, behind-the-scenes roles in the launch of the journal, with Darla Henderson and Sonja Krane especially critical to the journal development.

I am extremely enthusiastic about the future of catalysis science and the role that *ACS Catalysis* will play in communicating discoveries in the field. After over a century of research filled with breakthroughs, there still remains much to be done in catalytic science and technology. Welcome to the first issue of *ACS Catalysis*.

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