

Editorial

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Dear readers,

As we announce another version of *The Chemist*, we would like to acknowledge significant advancements in the field of chemical sciences despite the challenges that scientists, researchers, and educators alike have had to endure. Just recently, the Fall 2025 Conference of the American Chemical Society (ACS) was hosted at the Walter E. Washington Convention Center and surrounding venues in Washington, D.C. The return of the American Chemical Society national conference to the nation's capital puts chemistry and related applications to the forefront of the nation's and world's priorities for scientific advancement.

During the American Institute of Chemists (AIC) Chemical Pioneers Symposium in May of this year, Prof. Dale Boger was honored as a 2025 Chemical Pioneer and presented research from his laboratory at the Scripps Research Institute in La Jolla, California. In the headlining article for this year's issue, Dr. Boger highlighted the total syntheses of a series of natural products targeted by virtue of their biological properties. These complex structures inspired divergent synthetic strategies and synthetic methodology designed especially for the natural products of interest. Many of the molecules synthesized include vancomycin, maxamycins, ramoplanin, vinblastine, vincristine, bleomycin A, and several others including more than 100 natural products have been prepared by total syntheses, of which most represent biologically active natural products chosen by virtue of their properties. Many of these products contain cyclic peptides including glycopeptide antibiotics and several DNA binding natural products such as DNA binding, alkylation, and cleaving agents that exhibit antitumor activity.

Other papers in this issue also detail total synthesis including current trends in esters synthesis and the synthesis of dimethyl methylene phosphate, which is an innovative phosphorylated compound with broad-spectrum potential. Several adsorption studies were also part of the issue including humic acid adsorption on natural fiber surface-modified polypropylene and the adsorptive removal of Congo red dye by a synthesized dual ligand. The synthesis and characterization of several natural products were also discussed and detailed in this journal issue including the structural elucidation of ethanol extraction of *Plectranthus zeylanicus* and the antimicrobial and antioxidant properties of extracts from the leaves of Syrian *Juniperus excelsa* M. Bieb. Furthermore, more fundamental articles were also published on metal complexes of ligan 6-amino penicillanic acid (6-APA) including biological activity and molecular docking applications and the reactions of C₂H₅O₂ and C₂H₅ radicals on acidic and basic surfaces.

As the summer comes to an end and the academic year begins, we wish you the very best going forward and hope to receive your submissions to *The Chemist*!