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New reactivity in organic chemistry: a themed collection

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Few would argue that developing an intuitive feel for why some reactions work, while others never have a chance, is the most coveted skill in organic chemistry. As this multifaceted science continues to deliver discoveries at an ever-increasing pace, there are times when we might want to pause and reflect on how we find new reactions. This encompasses both strategic and purely tactical aspects of putting molecules together, regardless of their relative complexity. If we focus on the kinds of chemistry pursued by a wide range of its practitioners, we might also marvel at how cutting edge structural analysis gives the seemingly well-established processes a new life. With this in mind, we have put together a collection of articles published in *Chemical Science* that illuminate the unique approaches to developing and understanding chemical transformations. We felt that the best way to showcase recent advances in the field would be to assemble a broad cross-section of researchers who bring their unique perspective and training to modern organic chemistry.

This collection covers a tremendous breadth of advances in chemistry and spans the organic, inorganic, and bio-organic fields, to name a few. In it you will find Cristina Nevado's take on oxidant speciation in gold catalysis (DOI: 10.1039/C9SC02372K), Nuno Maulide's sulfonium ylide cycloisomerization reactions (DOI: 10.1039/C8SC02815J), Franziska Schoenebeck's mechanistic paper dealing with palladium-catalyzed addition of C–X bonds to alkenes (DOI: 10.1039/C6SC05001H), Akiko Yagi's report on C–H activation of cubane derivatives (DOI: 10.1039/D0SC01909G), David Nagib's copper-catalyzed radical relays (DOI: 10.1039/C8SC04366C), Mikiko Sodeoka's investigation of alkene oxy- and amino-perfluoroalkylations (DOI: 10.1039/C8SC02547A), Tehshik Yoon's paper on the catalysis of photosensitized cycloadditions (DOI: 10.1039/C9SC04822G), Uttam Tambar's carbene catalysis for Hauser–Kraus annulations (DOI: 10.1039/D0SC03116J), Margaret Brimble's study on the total synthesis of glycocin F and its analogues (DOI: 10.1039/C7SC04383J), Richmond Sarpong's bio-inspired synthesis of xishacorenes (DOI: 10.1039/C9SC02572C), and many other papers. Taken together, we feel that these contributions not only serve to highlight the tremendous span of the insights that bear on the chemistry challenges of today, but also the diversity of modern academic chemistry. We hope that the assembled papers will be widely read by chemists in academia and industry. Significantly, we anticipate that our collection will inspire the next generation of students to take on chemical science and advance it to the next frontier.

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