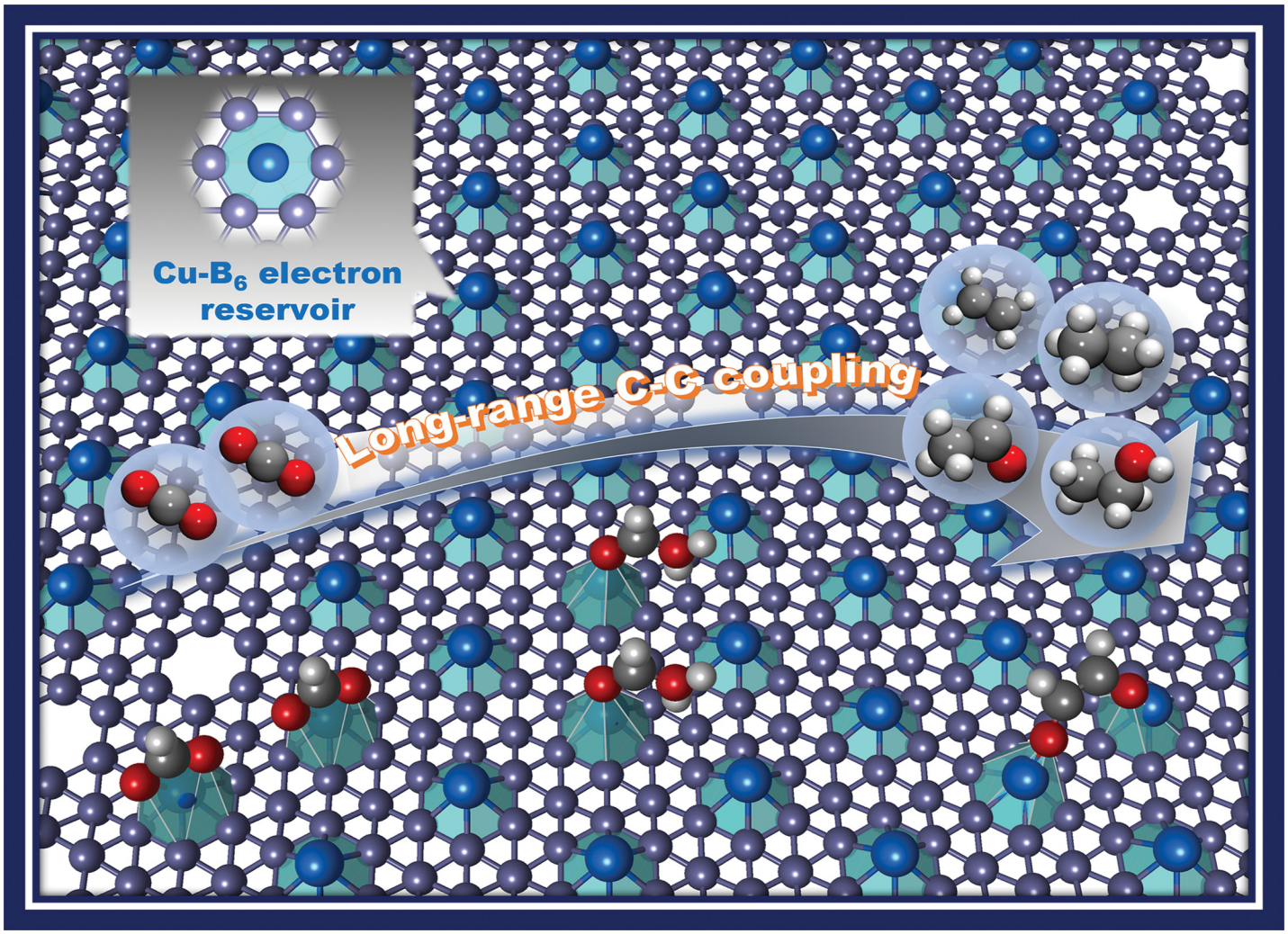

Showcasing research from the group of Prof. Lang Xu at China University of Mining and Technology

Neighbouring Cu–B_6 electron reservoirs in α-borophene promote long-range C–C coupling to generate C_2 products from CO_2

This work has theoretically demonstrated that it is a highly effective way to construct a catalyst having uniform active sites by anchoring high-density neighbouring Cu single atoms to vacancies of α-borophene. The neighbouring Cu–B_6 electron reservoirs promote a unique long-range C–C coupling, enabling the electrogeneration of C_2 products from CO_2. A new design for the uniform distribution of neighbouring single-atom sites helps us to navigate through useful mechanistic insights into the C–C coupling.

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