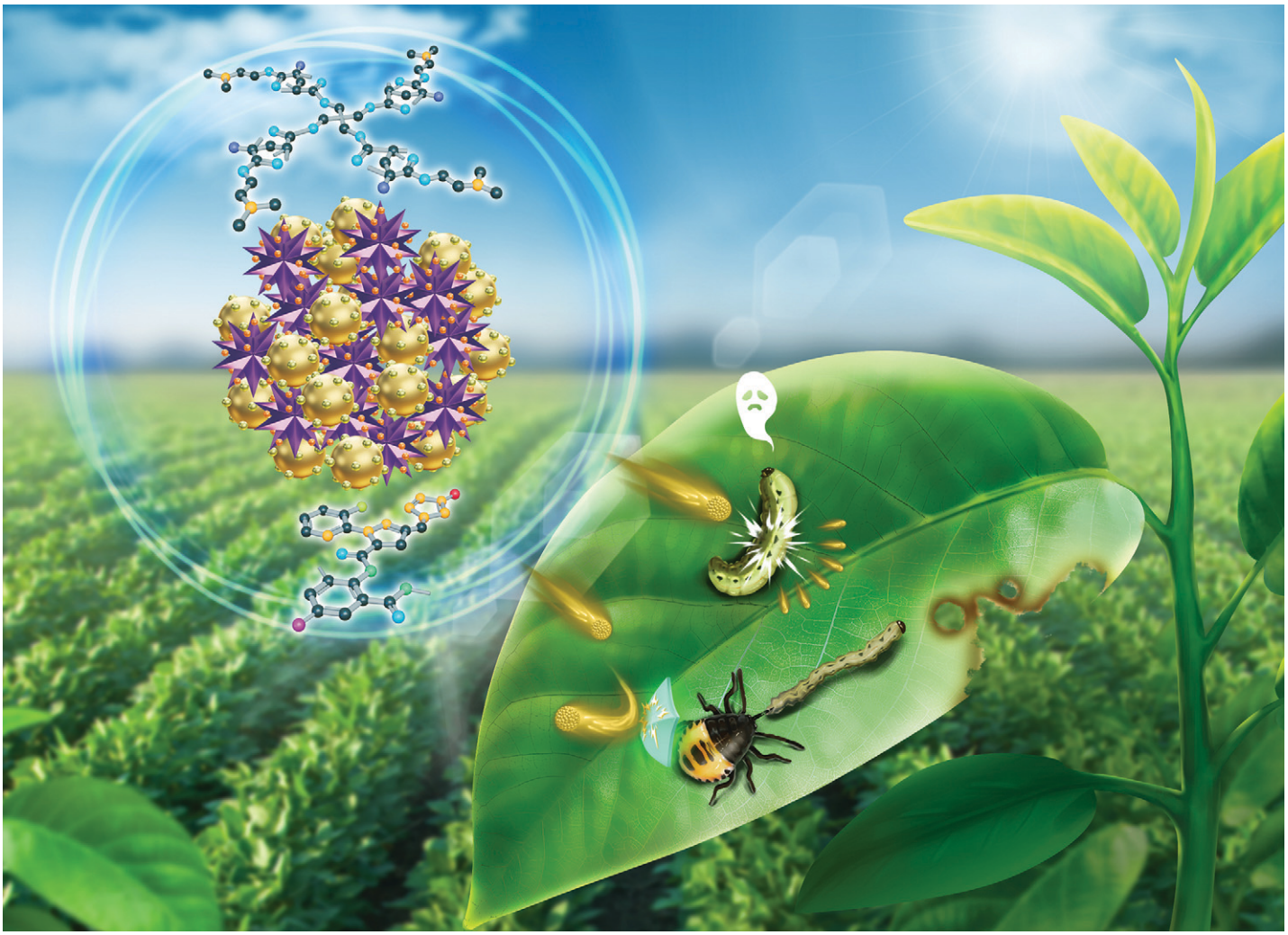

Showcasing research from the group of Hu Li and Shuo Yan at the College of Plant Protection, China Agricultural University, Beijing, P. R. China.

Construction of a nontoxic nano-pesticide and its co-application with natural predators for perfect cooperative pest management: an innovative strategy for pesticide reduction

The current study developed a nontoxic nano-pesticide (tetraniliprole/SPc complex) toward the predatory stinkbug with enhanced bioactivity toward the insect pest common cutworm. The star cationic polymer (SPc) for nano-pesticide preparation exhibited negligible toxicity against the predator. Subsequently, the nano-pesticide was constructed *via* hydrogen bond and van der Waals forces, and its contact and stomach toxicity were significantly improved against the common cutworm. Importantly, the predators displayed a strong predation selectivity for living pests, while the application of nano-pesticide did not show any adverse impacts on predators. Thus, the co-application of the nano-pesticide and predatory stinkbug could achieve efficient pest control.

As featured in:

See Shuo Yan, Hu Li *et al.*, *Environ. Sci.: Nano*, 2024, **11**, 1902.

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