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## **【501】 Mobile excitons revealed in quasi-1D system by ARPES**

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To unveil mobile excitons we use angle-resolved photoemission spectroscopy (ARPES) to detect dispersing excitons in the quasi-one-dimensional metallic trichalcogenide TaSe<sub>3</sub>. While screening usually suppresses exciton formation in metals, the low density of conduction electrons, the low dimensionality, and two many-body effects favor them. In this presentation I will introduce the idea how to use ARPES to detect dispersing excitons in the quasi-one-dimensional metallic trichalcogenide. We show that the interplay of dilute conduction electrons, low effective dimensionality, and heavy quasiparticles seems to result not only in a single excitonic branch of excitations, but even in multiple “sidebands”, suggesting the possibility of creating bound states with different internal structure.

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