An electrochemical method has been developed to selectively extract Ti from the MAX phase Ti$_2$SC to give C/S nanolaminates composed predominantly of amorphous and some graphene-like nanoflakes. In their Communication (DOI: 10.1002/anie.201500110), Y. Gogotsi et al. demonstrate the C/S nanolaminates to be promising cathode candidates for Li/S batteries. They also show that it is possible to electrochemically selectively extract Ti from a number of other MAX phases to create a new class of “AX” phases, most of which should be nanolayered.