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Tailoring and Tuning the Tolerance of a Pt Chalcogenide Cathode Electrocatalyst to Methanol

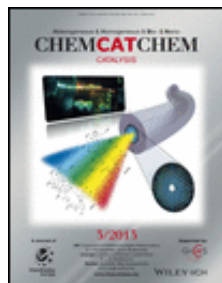
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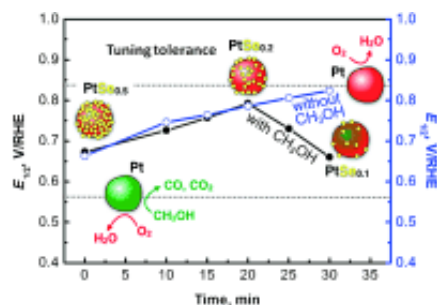
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chalcogens; fuel cells; electrochemistry; nanoparticles; reduction

Name that tune: A simple and new method to produce a methanol-tolerant Pt chalcogenide catalyst for the oxygen reduction reaction (ORR) is developed. The catalyst is tuned by electrochemical stripping of the Se atoms on the surface of the catalyst. The resulting electrode nanomaterial is PtSe_{0.2}, and it shows the highest activity ever reported for the ORR in solutions containing methanol.



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