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Two-dimensional Pd-nanosheets as efficient electrocatalysts for ethanol electrooxidation. Evidences of the C-C scission at low potentials

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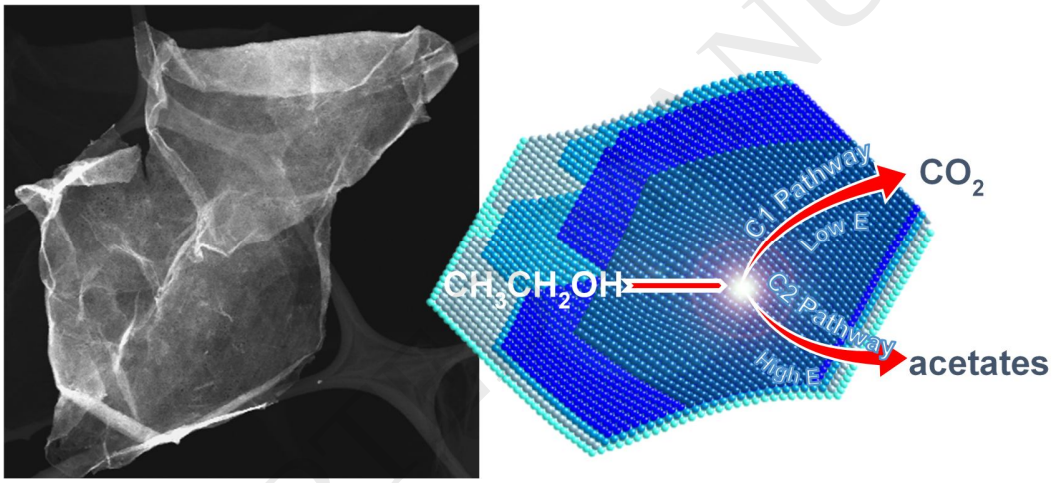
Graphical abstract



Highlights

- Pd-nanosheets with high surface area > 200 m^2/g have been prepared
- Pd-nanosheets expose 111 planes terminated by 110 planes
- EOR activity superior to nanosized commercial Pd particles are obtained
- *In situ* IRRAS during EOR demonstrate C-C scission at low potentials
- The C2 pathway (acetates) is the preferred one at high potentials