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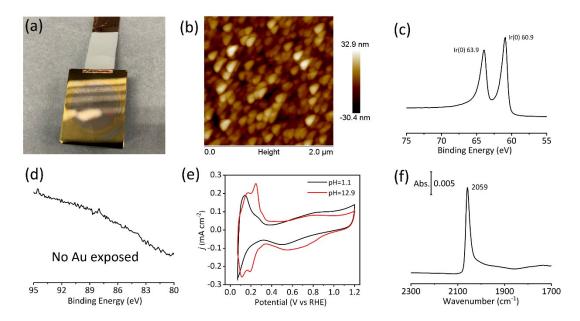
## Electrolyte pH-Dependent Hydrogen Binding Energies and Coverages on Platinum, Iridium, Rhodium, and Ruthenium Surfaces

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**Figure S1.** a) A photo, b) AFM characterization, c) Ir 4f and d) Au 4f XPS spectra, e) CVs, and f) CO adsorption spectrum collected at 0.1 V in a 0.1 M HClO<sub>4</sub> solution of the Ir thin film.

Table S1. H<sub>atop</sub> coverage ratio (alkaline/acidic media)

	Ir	Rh	Ru	Pta
H <sub>atop</sub> coverage ratio	224%	1386%	1800%	193%

<sup>&</sup>lt;sup>a</sup> Data obtained from reference.<sup>25</sup> For Ir and Pt, the ratios were compared at 0 V vs RHE. Spectra at -0.1 V vs RHE were used for comparison on Rh and Ru.