

[The Effect of Platinum Deposition on the Water Photo-Reduction at p-Cu\(2\)O Semiconductor Electrodes with Visible Light Irradiation](#)

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Abstract: The surface of a p-Cu(2)O semiconductor photoelectrode was modified by electrodeposition of Pt nanoparticles and analyzed by XRD, SEM, XPS, and EIS (electrochemical impedance spectrometry) methods besides photocurrent measurements. The XRD, SEM, and XPS analyses showed the fabrication of Cu(2)O film and the deposition of Pt particles. On the electrodeposition of Pt nanoparticles, cathodic photocurrent was enhanced. The EIS analysis suggested that Pt nanoparticles enhance the charge transfer process to the solution.

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