M. ARISAWA\*, K. FUKUMOTO, M. YAMAGUCHI (TOHOKU UNIVERSITY, SENDAI, JAPAN) Rhodium-Catalyzed Oxidation of Unprotected Peptide Thiols to Disulfides with Oxygen in Water ACS Catal. 2020, 10, 15060-15064, DOI: 10.1021/acscatal.0c04799.

## **Rhodium-Catalyzed Formation of Disulfide Bonds in** Water

**Significance:** The disulfide bond is widely found in peptides and proteins, and it is important for the formation of the structures of proteins. The authors report a rhodium-catalyzed oxidation reaction to form disulfide bonds in water.

Comment: Various peptide disulfides can be synthesized in water by using a rhodium(III) catalyst. No protecting groups are needed for these peptides in the reactions. The yields of the products are almost quantitative.

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## Key words

cysteine peptides rhodium catalysis disulfides oxidation



<sup>&</sup>lt;sup>a</sup> RhCl<sub>3</sub>·3H<sub>2</sub>O (5 mol%) was used.