oxidative coupling

The coupling of two molecular entities through an oxidative process, usually catalysed by a transition metal compound and involving dioxygen as the oxidant; e.g.

\[
2 \text{CO} + 2 \text{CH}_3\text{OH} + \frac{1}{2} \text{O}_2 \xrightarrow{\text{catalyst}} \text{COOCH}_3\text{COOCH}_3 + \text{H}_2\text{O}
\]

Source:
PAC, 1994, 66, 1077 (Glossary of terms used in physical organic chemistry (IUPAC Recommendations 1994)) on page 1149