



## Corrosion Resistive Materials, Systems, And Methods Of Forming And Using The Materials And Systems

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### The Invention

A method to reduce corrosion rates of materials at high temperatures may include heating a mixture and applying the heated mixture to a material to be rendered thermodynamically noble. The mixture may include carbon monoxide and carbon dioxide and the material rendered thermodynamically noble may include copper or other material having similar physical properties. The copper or other similar material may be applied to a structural material and provide a surface interfacing with the mixture of carbon monoxide and carbon dioxide to prevent corrosion of the structural material. In some cases, the structural material may form a heat exchanger defining passageways for a working fluid of a power system and/or may form other passageways of the power system. The copper may be applied to the passageways as a protective coating and then made thermodynamically noble at high temperatures after interactions with the mixture of carbon monoxide and carbon dioxide.

### Additional Information

#### For More Information About the Inventors

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#### Tech Fields

- [Materials & Chemicals : Metals](#)

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