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(57) Abstract: A process is disclosed for producing at least one aromatic carboxylic acid by contacting a liquid reaction mixture comprising an aromatic feedstock and water with oxygen in the presence of a bromine-free metal catalyst composition wherein the metal catalyst composition has activity in the absence of bromine for oxidation of the aromatic feedstock with at least 80% conversion to oxidized aromatic derivatives of the aromatic feedstock and with at least 80% selectivity to the aromatic carboxylic acid. This process operates in water without the use of bromine at temperatures and residence times substantially the same as conventional processes for aromatic carboxylic acid manufacture, as well as with less total burning and with yields to product equivalent or higher than conventional processes.

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