

# R R Rao

## List of Publications by Year in descending order

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Version: 2024-02-01

23  
papers

2,653  
citations

430874

18  
h-index

642732

23  
g-index

24  
all docs

24  
docs citations

24  
times ranked

3611  
citing authors

| #  | ARTICLE   | IF   | CITATIONS |
|----|---|------|-----------|
| 1  | Implications of Nonelectrochemical Reaction Steps on the Oxygen Evolution Reaction: Oxygen Dimer Formation on Perovskite Oxide and Oxynitride Surfaces. ACS Catalysis, 2022, 12, 1433-1442.   | 11.2 | 12        |
| 2  | The low overpotential regime of acidic water oxidation part I: the importance of O <sub>2</sub> detection. Energy and Environmental Science, 2022, 15, 1977-1987.   | 30.8 | 23        |
| 3  | The low overpotential regime of acidic water oxidation part II: trends in metal and oxygen stability numbers. Energy and Environmental Science, 2022, 15, 1988-2001.  | 30.8 | 35        |
| 4  | Spectroelectrochemical Analysis of the Water Oxidation Mechanism on Doped Nickel Oxides. Journal of the American Chemical Society, 2022, 144, 7622-7633.  | 13.7 | 66        |
| 5  | Spectroelectrochemistry of Water Oxidation Kinetics in Molecular versus Heterogeneous Oxide Iridium Electrocatalysts. Journal of the American Chemical Society, 2022, 144, 8454-8459.   | 13.7 | 25        |
| 6  | Reactivity with Water and Bulk Ruthenium Redox of Lithium Ruthenate in Basic Solutions. Advanced Functional Materials, 2021, 31, 2002249.   | 14.9 | 5         |
| 7  | Cation-Dependent Interfacial Structures and Kinetics for Outer-Sphere Electron-Transfer Reactions. Journal of Physical Chemistry C, 2021, 125, 4397-4411.   | 3.1  | 38        |
| 8  | pH- and Cation-Dependent Water Oxidation on Rutile RuO <sub>2</sub> (110). Journal of Physical Chemistry C, 2021, 125, 8195-8207.   | 3.1  | 45        |
| 9  | Regulating oxygen activity of perovskites to promote NO <sub>x</sub> oxidation and reduction kinetics. Nature Catalysis, 2021, 4, 663-673.  | 34.4 | 54        |
| 10 | The kinetics of metal oxide photoanodes from charge generation to catalysis. Nature Reviews Materials, 2021, 6, 1136-1155.  | 48.7 | 161       |
| 11 | Enhancing oxygen reduction electrocatalysis by tuning interfacial hydrogen bonds. Nature Catalysis, 2021, 4, 753-762.   | 34.4 | 122       |
| 12 | Direct Observation of Surface-Bound Intermediates During Methanol Oxidation on Platinum Under Alkaline Conditions. Journal of Physical Chemistry C, 2021, 125, 26321-26331.   | 3.1  | 8         |
| 13 | Redox-State Kinetics in Water-Oxidation IrO <sub>x</sub> Electrocatalysts Measured by Operando Spectroelectrochemistry. ACS Catalysis, 2021, 11, 15013-15025.   | 11.2 | 23        |
| 14 | Reply to: Questioning the rate law in the analysis of water oxidation catalysis on haematite photoanodes. Nature Chemistry, 2020, 12, 1099-1101.  | 13.6 | 9         |
| 15 | Operando identification of site-dependent water oxidation activity on ruthenium dioxide single-crystal surfaces. Nature Catalysis, 2020, 3, 516-525.  | 34.4 | 166       |
| 16 | Activity or Lack Thereof of RuO <sub>2</sub> -Based Electrodes in the Electrocatalytic Reduction of CO <sub>2</sub> . Journal of Physical Chemistry C, 2019, 123, 17765-17773.  | 3.1  | 13        |
| 17 | An In Situ Surface-Enhanced Infrared Absorption Spectroscopy Study of Electrochemical CO <sub>2</sub> Reduction: Selectivity Dependence on Surface C-Bound and O-Bound Reaction Intermediates. Journal of Physical Chemistry C, 2019, 123, 5951-5963. | 3.1  | 172       |
| 18 | Anomalous Antiferromagnetism in Metallic RuO <sub>2</sub> Determined by Resonant X-ray Scattering. Physical Review Letters, 2019, 122, 017202.  | 7.8  | 53        |

| #  | ARTICLE  | IF   | CITATIONS |
|----|--|------|-----------|
| 19 | Trends in Activity and Dissolution on RuO <sub>2</sub> under Oxygen Evolution Conditions: Particles versus Well-Defined Extended Surfaces. ACS Energy Letters, 2018, 3, 2045-2051. | 17.4 | 144       |
| 20 | Surface Orientation Dependent Water Dissociation on Rutile Ruthenium Dioxide. Journal of Physical Chemistry C, 2018, 122, 17802-17811.   | 3.1  | 44        |
| 21 | CO <sub>2</sub> Reactivity on Cobalt-Based Perovskites. Journal of Physical Chemistry C, 2018, 122, 20391-20401.   | 3.1  | 18        |
| 22 | Towards identifying the active sites on RuO <sub>2</sub> (110) in catalyzing oxygen evolution. Energy and Environmental Science, 2017, 10, 2626-2637.                              | 30.8 | 278       |
| 23 | Perovskites in catalysis and electrocatalysis. Science, 2017, 358, 751-756.  | 12.6 | 1,138     |