

Chem Soc Rev

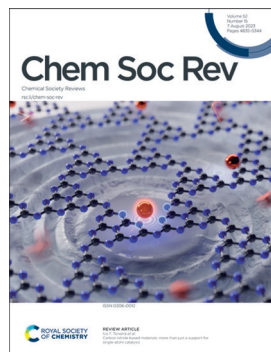
Chemical Society Reviews

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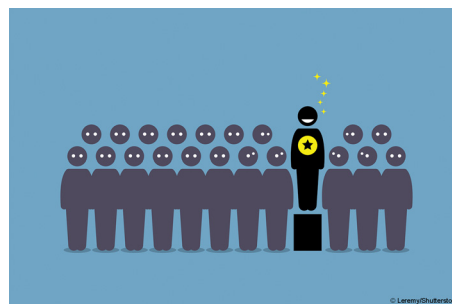
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Outstanding Reviewers for Chemical Society Reviews in 2022



TUTORIAL REVIEW

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Unnatural helical peptidic foldamers as protein segment mimics

Peng Sang* and Jianfeng Cai*



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Carbon nitride based materials: more than just a support for single-atom catalysis

Recent progress and strategic perspectives of inorganic solid electrolytes: fundamentals, modifications, and applications in sodium metal batteries

The diagram illustrates a battery structure with various components and their properties. The battery is composed of several layers: a top layer with Na, B, P, H, and Na; a middle layer with Na, P, S, Na, S, and Na, P, S; a bottom layer with Na, S, Na, S, and Na, S; and a base layer with Na, S, Na, S, and Na, S. The battery is surrounded by a 'Crystal Structure' and a 'Solid Electrolyte'. The diagram is divided into four quadrants, each with a different color and a set of properties:

- Top-Left (Orange):** High Ionic Conductivity, Stable Interface with No Metal, Facile Production, Low Cost.
- Top-Right (Teal):** Wide Electrochemical Window, High Thermal Stability, Good Mechanical Strength, Non-flammable and Non-toxic.
- Bottom-Right (Light Blue):** Low Self-Discharge, Low Temperature Operation, Low Voltage.
- Bottom-Left (Dark Blue):** High Energy Density, High Power Density, High Cycle Life, High Coulombic Efficiency.

The central part of the diagram shows a 'Solid Electrolyte' layer with 'Inorganic Sodium Ion Solid-state Electrolyte' and 'All Current Collector'.

Asymmetric arene hydrogenation: towards sustainability and application

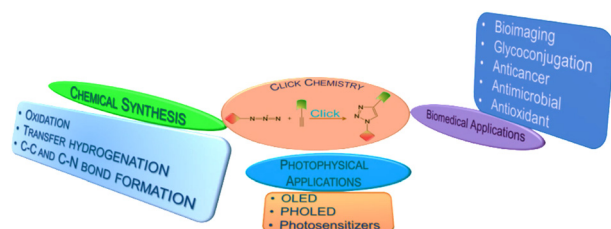
The diagram shows a chemical reaction where a 2D molecule (a benzene ring with substituents X and Y) reacts with H₂ (hydrogen gas, represented by a sun and a water drop) to form a 3D molecule (a cyclohexane ring with substituents X and Y). The text "H₂ as renewable feedstock" is written below the reaction arrow. Below the diagram, there are three bullet points: "• Rapid Access to Molecular Complexity", "• Readily Accessible Starting Materials", and "• Prominent Motifs in Pharmacophores".

- Rapid Access to Molecular Complexity
- Readily Accessible Starting Materials
- Prominent Motifs in Pharmacophores

Spatially and temporally understanding dynamic solid–electrolyte interfaces in carbon dioxide electroreduction

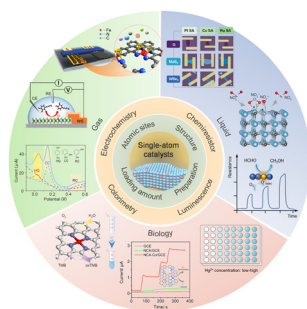
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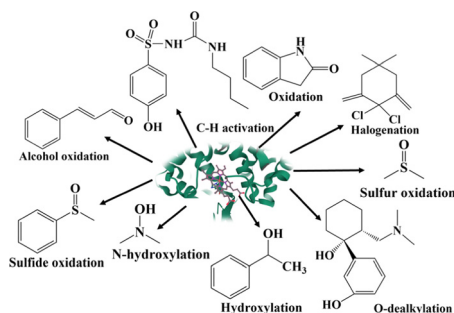
Md Gulzar Ahmad, M. M. Balamurali* and Kaushik Chanda*

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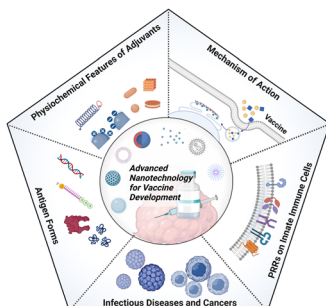
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Hongze Ren, Wencong Jia, Yujie Xie,* Meihua Yu* and Yu Chen*



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Insights into the solvation chemistry in liquid electrolytes for lithium-based rechargeable batteries

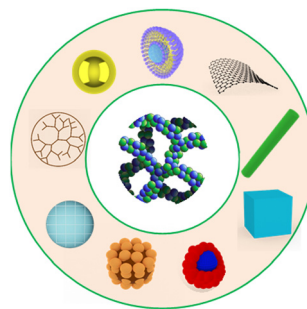
Peitao Xiao,* Xiaoru Yun, Yufang Chen, Xiaowei Guo, Peng Gao, Guangmin Zhou* and Chunman Zheng*



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