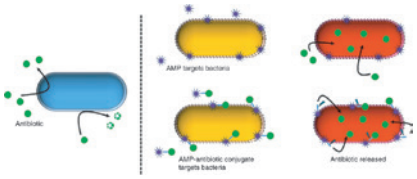
In this issue

Dean E. Sheard, Neil M. O'Brien-Simpson, John D. Wade and Frances Separovic
Combating bacterial resistance by combination of antibiotics with antimicrobial peptides

https://doi.org/10.1515/pac-2018-0707
Pure Appl. Chem. 2019; 91(2): 199–209

Special topic: Antibiotics covalently linked to antimicrobial peptides attack bacterial cells.

Keywords: antibiotics; antimicrobial activity; Distinguished Women in Chemistry and Chemical Engineering; membranes; peptides.

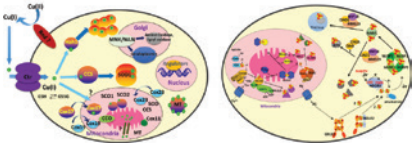


Francesca Camponeschi and Lucia Banci
Metal cofactors trafficking and assembly in the cell: a molecular view

https://doi.org/10.1515/pac-2018-0720
Pure Appl. Chem. 2019; 91(2): 231–245

Special topic: Metal cofactor trafficking and homeostasis in human cells are controlled by complex and selective pathways, which assure that the metal ion reaches the specific target protein.

Keywords: CIA machinery; copper; Distinguished Women in Chemistry and Chemical Engineering; iron-sulfur proteins biogenesis; ISC machinery; metal homeostasis; metal transport; metallochaperones.



Katharina Kohse-Höinghaus
A new era for combustion research

https://doi.org/10.1515/pac-2018-0608
Pure Appl. Chem. 2019; 91(2): 271–288

Special topic: Detailed chemical information is essential to understand combustion fundamentals and to develop low-emission, high-efficiency combustion systems.

Keywords: biofuels; combustion; combustion models; Distinguished Women in Chemistry and Chemical Engineering; energy; fuels; pollutant formation; reaction mechanisms.

Misako Aida and Dai Akase
Hydrogen-bond pattern to characterize water network

https://doi.org/10.1515/pac-2018-0721
Pure Appl. Chem. 2019; 91(2): 301–316

Special topic: Schematic description of potential energy surface (four local minima) and configuration space (5 HB patterns) of water trimer. An HB pattern to which no local minimum corresponds is the most populated at 300 K.

Keywords: digraph; dipole moment of water; Distinguished Women in Chemistry and Chemical Engineering; HB pattern; O–H vibrational frequency; topology of network.