ACADÉMIE DES SCIENCES
INSTITUT DE FRANCE

Comptes Rendus
Chimie

Rédacteur en chef : Pierre Braunstein, Strasbourg
Rédacteurs associés : Janine Cossy, Paris
Azzedine Bousseksou, Toulouse
https://comptes-rendus.academie-sciences.fr/chimie

« LES FEMMES CHIMISTES EN FRANCE EN 2025 »

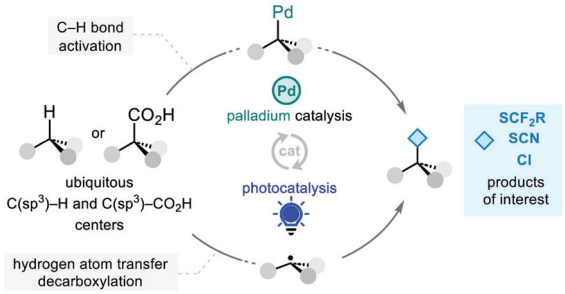
Le logo du CNRS apparaît à côté de celui de l'Académie des sciences car un accord de co-publication des *Comptes Rendus* a été signé le 3 décembre 2025. Il constitue un signal fort de qualité et d'encouragement pour la science ouverte. Nous sommes également heureux de renforcer nos liens avec la Société Chimique de France (SCF), en échangeant, avec sa revue *L'Actualité Chimique*, diverses informations scientifiques pour faciliter la diffusion des résultats des recherches publiés dans les *Comptes Rendus* et d'accroitre la synergie entre les acteurs de la chimie en France.
Nous remercions la SCF d'accueillir des synopsis d'articles publiés dans le numéro thématique **« Les femmes chimistes en France en 2025 »** qui fut coordonné par Janine Cossy.
N'hésitez pas à nous faire part de vos avis et suggestions !

Pierre Braunstein

MODERN TOOLS FOR THE FUNCTIONALIZATION OF C(sp3) CENTERS BY CATALYSIS

Floris Buttard, Tatiana Besset
DOI: 10.5802/crchim.338

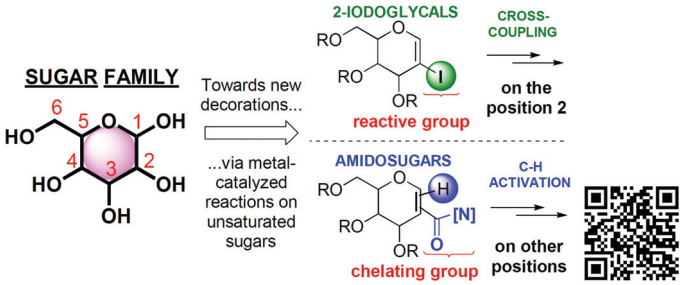
Keywords: Synthetic methodology, C(sp3) centers, Transition metal catalysis, Photochemical transformations, Proximal and distal functionalization



DIVERSITY IN GLYCOCHEMISTRY THOUGH METAL-CATALYZED REACTIONS

Angélique Ferry
DOI: 10.5802/crchim.373

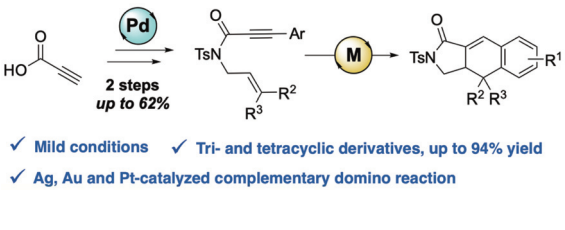
Keywords: Metal catalysis, Glycals, Cross-coupling, C–H functionalization



SILVER-, GOLD- AND PLATINUM-CATALYZED [4+2]-CYCLIZATIONS: SYNTHESIS OF 2,3,3a,4-TETRAHYDRO-1*H*-BENZO[*f*]ISOINDOL-1-ONE DERIVATIVES

Keyu Mao, Kristina Plevova, Xi Chen, Laura Juliana Prieto Pabon, Sophie Poulain-Martini, Véronique Michelet
DOI: 10.5802/crchim.357

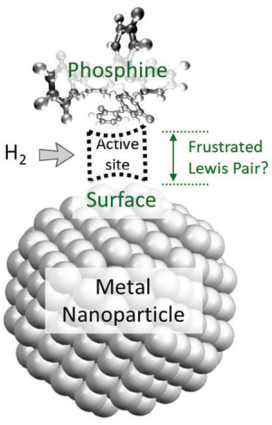
Keywords: Catalysis, Silver, Domino reaction, Cyclization



FRUSTRATED LEWIS PAIRS ON NANOPARTICULES FOR COLLOIDAL CATALYSIS DREAM OR REALITY?

Sophie Carenco
DOI: 10.5802/crchim.334

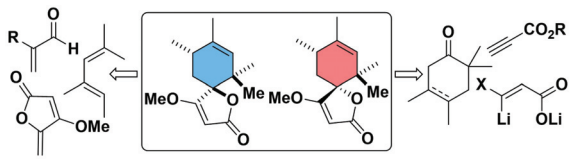
Keywords: Nanoparticle, Frustrated Lewis pairs, Catalysis, Hydrogenation, Phosphine, Stereoelectronic maps



STEREOSELECTIVE STRATEGIES TO ACCESS SPIROTETRONATE NATURAL PRODUCTS

Aurélien Brion, Luc Neuville, Géraldine Masson
DOI: 10.5802/crchim.352

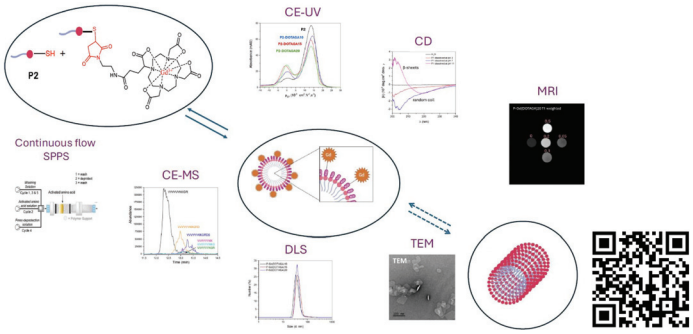
Keywords: Spirotetronates, Diels–Alder reaction, Stereoselective synthesis, Total synthesis



FROM DESIGN TO FORMULATION OF PEPTIDE BUILDING BLOCKS FOR NANOTHERANOSTIC APPLICATIONS: A SYNERGISTIC MULTIDISCIPLINARY INVESTIGATION

Alice Am, Laura Trapiella-Alfonso, Camille Lescot, Bich-Thuy Doan, Fanny d'Orlyé, Anne Varenne
DOI: 10.5802/crchim.372

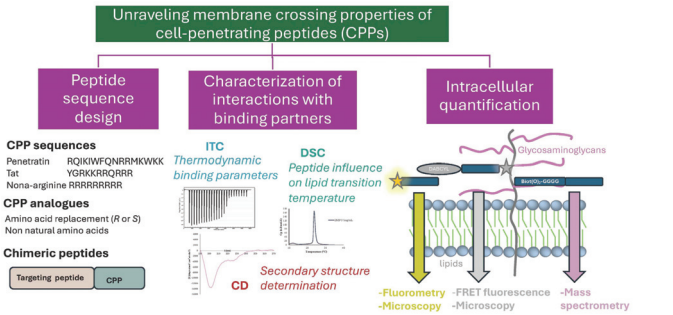
Keywords: Short synthetic amphiphilic peptides, Continuous flow SPPS peptide synthesis aided by CE-MS, Peptide self-assembly, Physicochemical characterization, MRI, Theranostic agents



MOLECULAR ASPECTS OF CELL-PENETRATING PEPTIDES: KEY AMINO ACIDS, MEMBRANE PARTNERS, AND NON-COVALENT INTERACTIONS

Astrid Walrant, Farah Tazi, Sonia Khemaissa, Sandrine Sagan
DOI : 10.5802/crchim.359

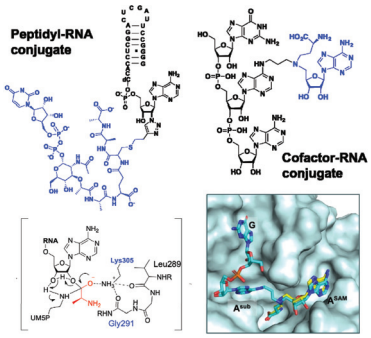
Keywords: Cell-penetrating peptide, Membrane, Tryptophan, Ion pair–π interactions,



SYNTHESIS OF RNA CONJUGATES AS BISUBSTRATES FOR THE STUDY OF TRANSFERASES

Laura Iannazzo, Emmanuelle Braud, Matthieu Fonvielle, Mélanie Etheve-Quelquejeu
DOI: 10.5802/crchim.356

Keywords: Bisubstrate, Aminoacyl transferases, RNA methyltransferases, Nucleoside chemistry, RNA conjugates

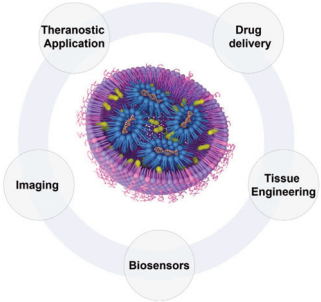


synthesis of RNA conjugates as bisubstrates for studying RNA-dependant enzymes

PRECISION NANOPARTICLES FOR DRUG DELIVERY, CELL THERAPY TRACKING, AND THERANOSTICS

Delphine Felder-Flesch, Laura Talamini, Sylviane Muller
DOI: 10.5802/crchim.348

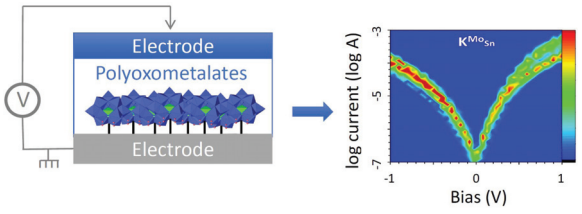
Keywords: Multifunctional nanoparticles, Tissue targeting, Precision medicine, Cell therapies, Extracellular vesicles, Nanotheranostics, Cancer and inflammation



UNVEILING POLYOXOMETALATE REDOX PROPERTIES AT THE NANOSCALE

Florence Volatron, Guillaume Izzet, Dominique Vuillaume, Anna Proust
DOI: 10.5802/crchim.344

Keywords: Polyoxometalates, Molecular oxides, Redox-active molecules, Surface functionalization, Nanojunctions, Electron transport, Resistive switching devices



HIGHLIGHTS OF EPOXIDIZED NATURAL RUBBER: FROM SELF-VULCANIZING BLENDS TO REPROCESSABLE CHEMICAL OR PHYSICAL NETWORKS

Lucie Imbernon, Myriam Pire, Evdokia K. Oikonomou, Szilvia Karpati, Sylvie Tencé-Girault, Sophie Norvez
DOI: 10.5802/crchim.374

Keywords: Epoxidized natural rubber (ENR), Crosslinking by carboxylic diacids, Crystallizable grafts, Reprocessability, Sustainability