Synlett

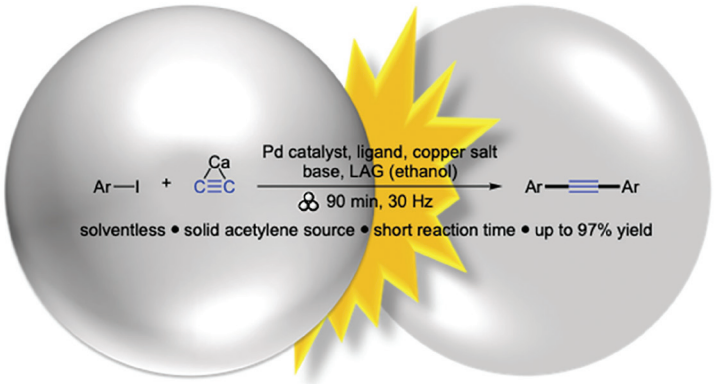
Accounts and Rapid Communications in Chemical Synthesis

June 1, 2022 • Vol. 33, 805–902

Cluster

Mechanochemistry

Editor: Tomislav Rovis, Guest Editor: Jeff Moore



Mechanochemical Synthesis of Diarylethynes from Aryl Iodides and CaC_2

P. van Bonn, C. Bolm

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Synlett

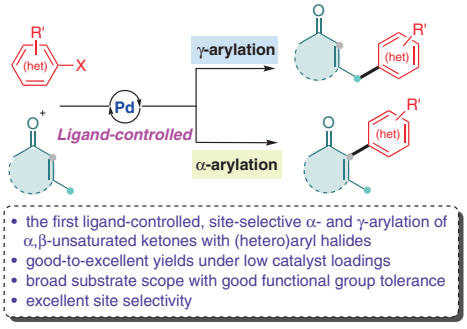
Synlett **2022**, *33*, 805–814
DOI: 10.1055/s-0040-1719877

O. Y. Yuen
C. M. So*
The Hong Kong Polytechnic University, P. R. of China

Palladium-Catalyzed Site-Selective Arylation of α,β-Unsaturated Carbonyl Compounds through a Ligand-Controlled Strategy

Synpacts

805



- the first ligand-controlled, site-selective α- and γ-arylation of α,β-unsaturated ketones with (hetero)aryl halides
- good-to-excellent yields under low catalyst loadings
- broad substrate scope with good functional group tolerance
- excellent site selectivity

Synlett

Synlett **2022**, *33*, 815–821
DOI: 10.1055/a-1796-2255

C. Shen
K. Dong*
East China Normal University, P. R. of China
Institute of Eco-Chongming, P. R. of China

Assembling Chiral Center of Heterocycles by Palladium-Catalyzed Asymmetric Hydrocarbonylation

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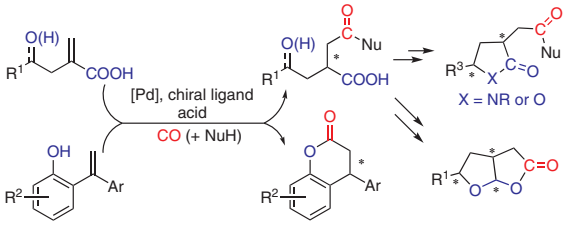
815



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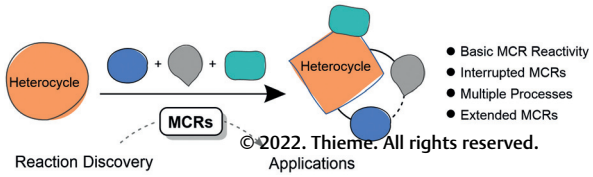
Synlett
Synlett **2022**, *33*, 822–835
DOI: 10.1055/a-1750-3185

O. Ghashghaei
P. N. Rodríguez
R. Lavilla*
University of Barcelona, Spain

Development of Heterocyclic Multicomponent Reactions through Guided Exploration: Direct, Reasonable and Unpredictable Processes

Account

822



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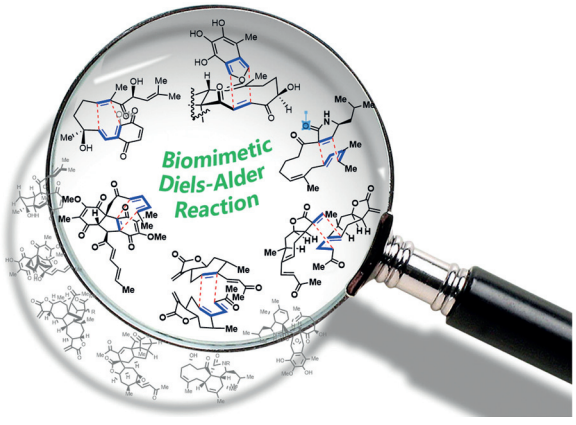
Synlett **2022**, *33*, 836–850
DOI: 10.1055/a-1748-4744

J. Liu
S. Xi
Y. Tang*
Tsinghua University, P. R. of China

Biomimetic Diels–Alder Reactions in Natural Product Synthesis: A Personal Retrospect

Account

836



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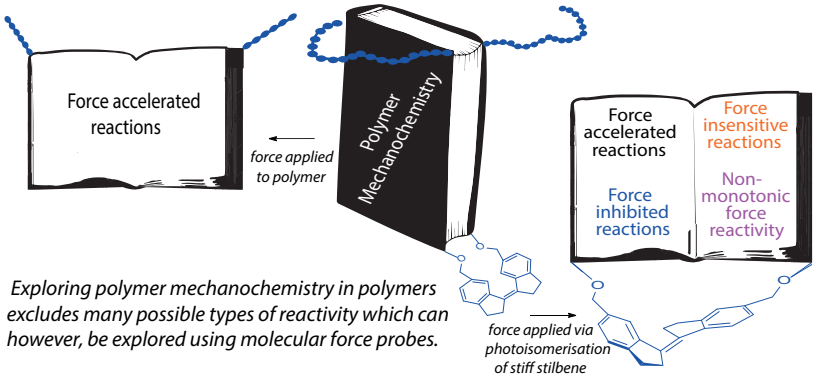
Synlett **2022**, *33*, 851–862
DOI: 10.1055/a-1710-5656

R. T. O'Neill*
R. Boulatov*
University of Liverpool, UK
Jilin University, P. R. of China

The Contributions of Model Studies for Fundamental Understanding of Polymer Mechanochemistry

Cluster Account

851



Exploring polymer mechanochemistry in polymers excludes many possible types of reactivity which can however, be explored using molecular force probes.

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Heterocyclic Mechanophores in Polymer Mechanochemistry

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863

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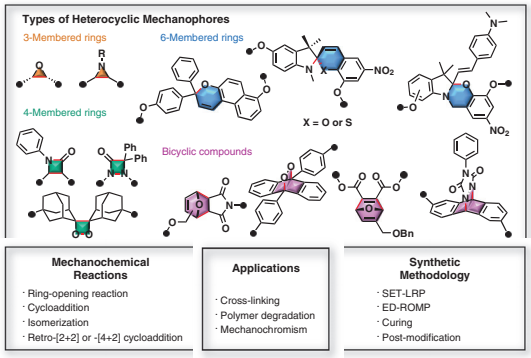
DOI: 10.1055/a-1703-2608

S. Jung
H. J. Yoon*
Korea University, South Korea



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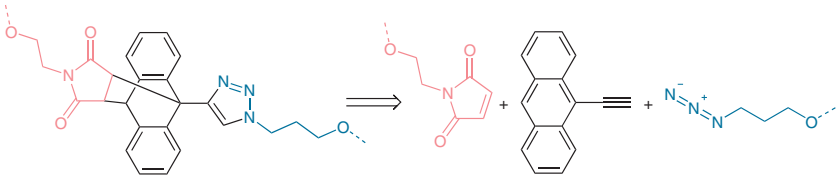
Triazole-Extended Anthracenes as Optical Force Probes

Cluster

875

Synlett **2022**, *33*, 875–878
DOI: 10.1055/s-0040-1720924

C. Baumann
R. Göstl*
DWI – Leibniz Institute for Interactive Materials, Germany



triazole-extended anthracene optical force probes by double "click" reaction

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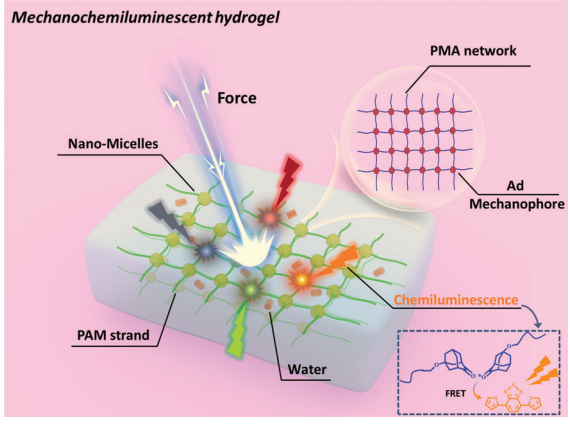
Mechanochemiluminescent Hydrogels for Real-Time Visualization of Chemical Bond Scission

Cluster

879

Synlett **2022**, *33*, 879–884
DOI: 10.1055/a-1733-6310

Q. Li
Q. Wang
Y. Yuan
Y. Chen*
Tianjin University, P. R. of China
Jilin University, P. R. of China



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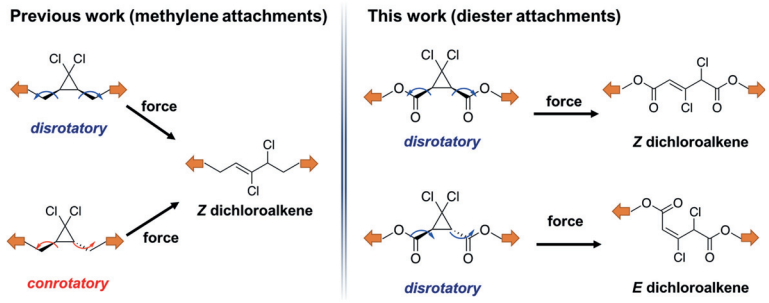
Synlett **2022**, *33*, 885–889
DOI: 10.1055/a-1760-8817

Pulling Outward but Reacting Inward: Mechanically Induced Symmetry-Allowed Reactions of *cis*- and *trans*-Diester-Substituted Dichlorocyclopropanes

Cluster **885**

Z. Wang
T. B. Kouznetsova
S. L. Craig*
Duke University, USA



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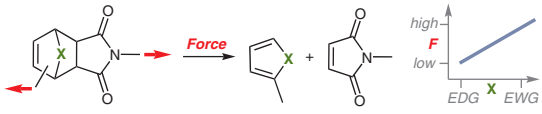
Synlett **2022**, *33*, 890–892
DOI: 10.1055/a-1799-7517

Stereoelectronic Effects in Force-Accelerated Retro-Diels–Alder Reactions

Cluster **890**

L. C. Wu
G. De Bo*
University of Manchester, UK



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Synlett **2022**, *33*, 893–897
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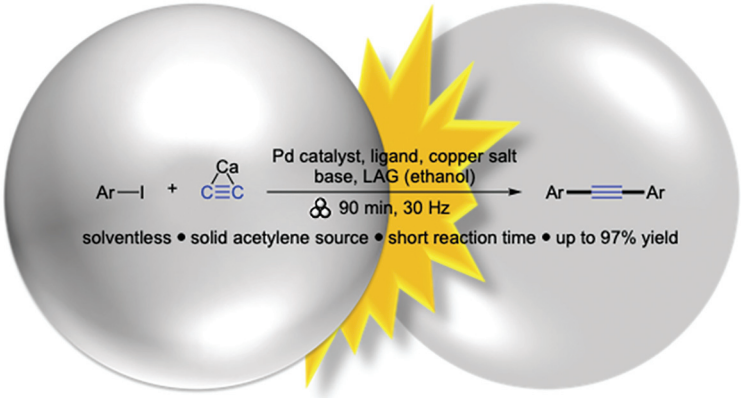
Mechanochemical Synthesis of Diarylethynes from Aryl Iodides and CaC_2

Cluster **893**

P. van Bonn
C. Bolm*
RWTH Aachen University, Germany



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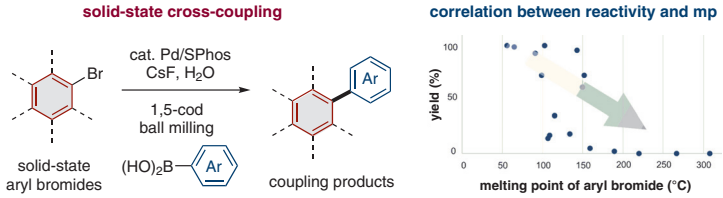
Synlett **2022**, *33*, 898–902
DOI: 10.1055/a-1748-3797

K. Kubota*
K. Kondo
T. Seo
H. Ito*
Hokkaido University, Japan

Insight into the Reactivity Profile of Solid-State Aryl Bromides in Suzuki–Miyaura Cross-Coupling Reactions Using Ball Milling



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