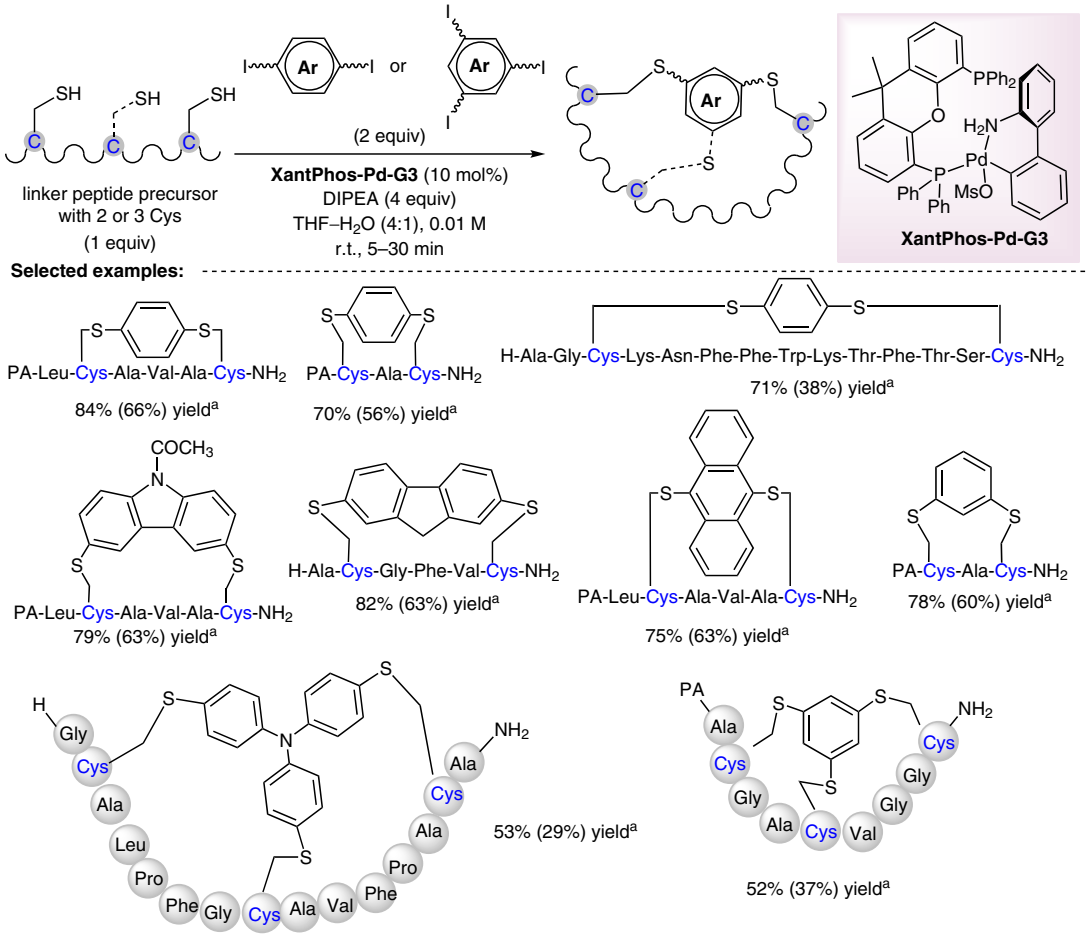
X. CHU, L. SHEN, B. LI, P. YANG, C. DU, X. WANG, G. HE, S. MESSAOUDI*, G. CHEN*
(UNIVERSITY PARIS-SACLAY, CHÂTENAY-MALABRY, FRANCE AND NANKAI UNIVERSITY, TIANJIN, P. R. OF CHINA)

Construction of Peptide Macrocycles via Palladium-Catalyzed Multiple S-Arylation: An Effective Strategy to Expand the Structural Diversity of Cross-Linkers
Org. Lett. **2021**, *23*, 8001–8006, DOI: 10.1021/acs.orglett.1c03003.

Palladium-Catalyzed Multiple S-Arylation for the Synthesis of Macrocyclic Peptides



[a] LC yields were based on the UV absorption of peptides, HPLC isolated yields are shown in parentheses.

Significance: Macrocyclic peptides are highly demanding targets in the field of peptide-drug discovery. The authors have developed an unprecedented macrocyclization of native peptides containing cysteine residues by reaction with di- or triiodo(het)arenes with the help of a palladium catalyst.

Comment: The palladium-catalyzed multiple S-arylation of cysteine residues of unprotected native peptides with di- or triiodo(het)arenes proceeded smoothly to afford the desired macrocyclic peptides in good yields. This method is practically simple and is one of the most powerful methods for the production of cross-linked peptide macrocycles.

SYNFACTS Contributors: Hisashi Yamamoto, Isai Ramakrishna
Synfacts 2022, 18(01), 0101 Published online: 17.12.2021
DOI: 10.1055/s-0041-1737499; **Reg-No.:** H12222SF

Category
Peptide Chemistry

Key words
palladium catalysis
macrocyclization
S-arylation
iodoarenes
cross-linked peptide macrocycles

Synfact of the Month