B. PIGULSKI, A. ARENDT, D. N. TOMILIN, L. N. SOBENINA, B. A. TROFIMOV, S. SZAFERT* (UNIVERSITY OF WROCŁAW, POLAND AND A. E. FAVORSKY IRKUTSK INSTITUTE OF CHEMISTRY, RUSSIAN FEDERATION)
Transition-Metal Free Mechanochemical Approach to Polyyne Substituted Pyrroles J. Org. Chem. 2016, 81, 9188-9198.

## Category

## Key words

## pyrroles

## C-H <br> functionalization

## alkynes



Selected examples:



Significance: The authors present a metal-free, mechanochemical synthesis of polyyne-substituted pyrroles. The structurally demanding hexatri-ynyl- and octatetraynyl-substituted pyrroles were successfully obtained by simple grinding of 1haloalkynes, pyrroles, and potassium carbonate. This approach is unprecedented in the synthesis of long polyynes.
sYnfacts Contributors: Timothy M. Swager, Cagatay Dengiz Synfacts 2016, 12(12), 1245 Published online: 17.11.2016 DOI: 10.1055/s-0036-1589673; Reg-No.: S11616SF

Comment: The reported synthesis exhibits an effective way to obtain pyrrole-end-capped polyynes. Although coupling reactions of pyrroles with 1-haloalkynes are much more efficient using bromides rather than iodides, 1-iodoalkynes were used for the synthesis of longer polyynes in this work because of the poor stability of longer 1-bromoalkynes. The presented polyynes are promising candidates for molecular wire applications.

