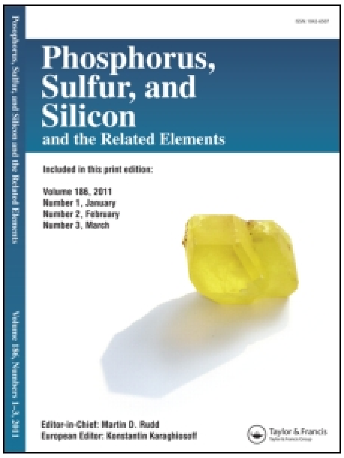

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ORTHO-LITHIATION IN O-CARBONYL CHALCOGENIDES SYNTHESIS

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4,4-dimethyl 2-phenyl-2-oxazoline (or 2-thiazoline) and 4,4,6-trimethyl 2-phenyl-2-oxazine undergo regiospecific ortholithiation. The lithio intermediate reacts with chalcogenes (S, Se, Te) and methyliodide. The o-methyl thio or o-methyl seleno oxazolines (or thiazolines) can be transformed by classical methods to corresponding acids, aldehydes and ketones, which are starting material of choice for elaboration of chalcogen heterocycles. Unfortunately such transformations are not possible with the corresponding tellurides. On the other hand, N,N-dimethylbenzamide can be similarly ortho metalled. The ortho lithio species only reacts with organo chalcogen electrophiles giving, in an one pot reaction, o-carbonyl sulfides, selenides and tellurides. Several applications to substituted benzo(b)selenophens synthesis are described.