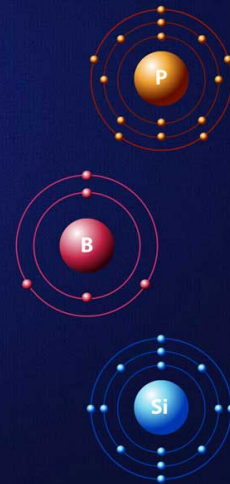


# PBSi 2017

International Conference On  
Phosphorus, Boron and Silicon

July 3-5, 2017 | Paris



## Using muon spin resonance spectroscopy to explore free-radical reactivity of silicon, phosphorus, germanium, boron compounds

Prof. Robert C West  
University of Wisconsin–Madison, USA

Positive muons, subatomic particles of antimatter, have a lifetime of 2.2 microseconds. They can be generated only at a high-power cyclotron or similar particle accelerator. During their brief lifetime, muons are capable of capturing electrons to become muonium atoms, which, in turn, may act as free radicals in subsequent chemical reactions. The discovery of the reaction between muonium and a stable silylene in 2010 has led to the promising and exciting area of rapid reaction chemistry, which includes muonium-initiated reactions of silicon, phosphorus, germanium, and, perhaps, even boron compounds.