FACULTY OF SCIENCE
Charles University

School of Chemistry, Faculty of Science (FoS) would like to invite you to attend the lecture

Quo Vadis Chemie

Reactive Organophosphorus Species: Synthesis, Structure and Reactivity

which will be presented by

Dr. Artur MARDYUKOV

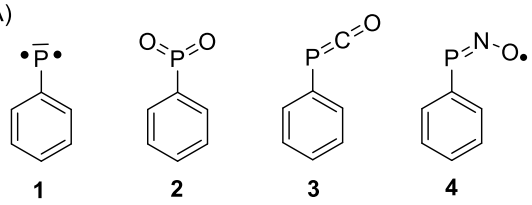
Justus Liebig University Giessen, Germany

on 13.03.2023 at 15:00

the Lecture Hall CH2, the School of Chemistry Building, FoS CU, Hlavova 8, Praha 2

Abstract: Phosphinidenes (R–P:) are a class of reactive intermediates, which are of considerable importance in a variety of organic reactions. Due to their high reactivity, the chemical properties of phosphinidenes have been deduced almost exclusively from trapping or complexation experiments. The talk reports the first synthesis, IR, and UV/vis spectroscopic characterization of parent phenylphosphinidene (**1**) and its reactions with small molecules (O_2, CO, NO) leading to **2**-**4**, which are elusive intermediates that we have identified using matrix isolation spectroscopy (Figure 1A). We illustrate that the chemical transformations involved are distinctly different from those observed with triplet nitrenes, the lighter congeners of **1.**

(A)



(B)