

Responses to referees' comments

Referee 1

The manuscript submitted by Liang, Liu, and coworkers presents a concise exploration of the [3+2] reactivity of potassium diazaphospholidinyl diazomethylide, showcasing interesting transformations of the diazomethylide. This work logically extends the group's previous publications on the applications of the potassium diazaphospholidinyl diazomethylide synthon. The manuscript is carefully composed, and the compounds are thoroughly characterized, often including structural determinations. Thus, I am supportive of the publication in Chin. J. Chem. after the following questions and comments are addressed.

1. A citation for Figure 1 is missing.
2. Page 2 left column, paragraph 2, line 7, "Notable examples of these anions is the..." should read "Notable examples of these anions are the..."
3. Page 2, right column, paragraph 2. "Conversely, diazaphospholidinyl substituents featuring a pyramidalized phosphorus atom act as π -acceptors, stabilizing a carbene with a $\sigma 0\pi 2$ electronic configuration,¹⁹ a stannyne,²⁰ ketenyl anions^{8a} and keteniminyl anions^{8b} through negative hyperconjugation."
The phosphorus atom in stannyne appears to be planar.
4. Page 4, left column, paragraph 1, line 9, "bond lengthen from..." should read "bond lengthens from..."
5. A recent study on the diazo [3+2] cycloaddition reaction could be added in ref 7: CCS Chem. 2024, 6, 2825–2834. Page numbers are missing for references 6a and 6b.

Referee 2

This study reports the reactions of potassium diazaphospholidinyl diazomethylide with phenylacetylene, acetonitrile, adamantyl phosphalkyne and styrene to form pyrazolide, triazolide, diazaphospholide, and pyrazolinide respectively. Therefore, the utility of diazaphospholidinyl diazomethylide as electron-rich 1,3-dipoles to couple with various dipolarophiles is well demonstrated. The manuscript and SI are very well prepared. Therefore, I highly suggest the acceptance of this work in Chin J Chem after addressing the following issues:

- (1) The term "Click chemistry" is not so relevant to the current work. I would suggest to remove it from the title.
- (2) In Figure 2 and TOC, it's better to clearly draw out the double bonds and triple bonds.