

## Rebuttal document

First of all, we are thankful for the editor's and reviewers' attention to the Manuscript and for the very enlightening feedback given to us.

### Editorial comments:

The manuscript has been modified and the updated manuscript, 60769\_R0.docx, is attached and located in your Editorial Manager account. Please use the updated version to make your revisions.

1. Please take this opportunity to thoroughly proofread the manuscript to ensure that there are no spelling or grammar issues.

Done

2. Please obtain explicit copyright permission to reuse any figures from a previous publication. Explicit permission can be expressed in the form of a letter from the editor or a link to the editorial policy that allows re-prints. Please upload this information as a .doc or .docx file to your Editorial Manager account. The Figure must be cited appropriately in the Figure Legend, i.e. "This figure has been modified from [citation]."

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3. Please use 12 pt font and single-spaced text throughout the manuscript.

Done

4. Please adjust the numbering of the Protocol to follow the JoVE Instructions for Authors. For example, 1 should be followed by 1.1 and then 1.1.1 and 1.1.2 if necessary. Please refrain from using bullets or dashes.

Done

5. Please add a one-line space between each of your protocol steps.

Done

6. Please do not abbreviate journal titles for references.

Done

### Reviewer: 1

#### Manuscript Summary:

In this manuscript submitted to the Journal of Visualized Experiments, the authors detail a procedure based on their recent publication in Green Chemistry (DOI:10.1039/C9GC02193K). The chemistry described in this manuscript is sound and even though the substrate scope is somewhat limited, as pointed out by the authors, the method offers a convenient and (mostly) green synthesis of a unique group of substituted benzene derivatives that should be of interest to medicinal and materials chemists.

The title and the abstract appropriately describe the method, the steps in the procedure are clearly outlined and all the necessary materials and equipment are listed. Inclusion of the safety protocols makes the procedure safer for people who may not be familiar with the chemicals to carry out the reaction. The techniques described at each step are standard synthetic techniques and should work well. The only exception may be the workup by centrifugation, using centrifugation for this purpose is quite unusual but sounds reasonable.

Major Concerns:

None

Minor Concerns:

In Figure 1, there is a general reaction scheme. In structure 3, EWG and R2 should be switched based on the reported structures of various products (3a-3n).

**Response: EWG and R2 switched as requested.**

**Reviewer: 2**

Manuscript Summary:

The authors describe an efficient method for synthesis of polyfunctionalized benzenes from the reaction of phenyl acetylenes with a,b unsaturated compounds in the presence of ammonium persulfate in Water. The reaction condition and diversity of products under metal-free conditions are advantages of this method.

Minor Concerns:

A plausible mechanism would be expected to be written for this reaction.

**Response: A figure containing the mechanism was added to the manuscript.**