Preparation and Rearrangement of $N$-Vinyl Nitrones

**Significance:** Herein, the authors disclose the single-step, copper-mediated coupling of fluorene oximes and vinyl boronic acids, which undergo thermal rearrangement via [3+2] cycloaddition to form spiroisoxazolines. The corresponding $N$-vinyl nitrones and spiroisoxazolines are obtained in good yield.

**Comment:** In addition, this methodology may be applied to the synthesis of fluorene-tethered isoxazoles by treatment of $N$-vinyl nitrones with terminal or internal electron-deficient alkynes. The mechanism is supposed to proceed via [3+2] cycloaddition and subsequent elimination.

**Selected examples:**

- \(\text{Et} = \text{Et, Me, H, Ph, 4-O}_2\text{NC}_6\text{H}_4\text{H}, 4-\text{FC}_6\text{H}_4\text{H}, 4-\text{F}_3\text{CC}_6\text{H}_4\)
- \(\text{R}_2 = \text{Et, Me, } n\text{-Bu, Ph}\)
- \(\text{R}_1 + \text{R}_2 = 1\text{-cyclohexene derivatives, 1-cyclopentene, 1-cycloheptene, dihydropyran}\)

- 61% yield
- 81% yield
- 54% yield
- 81% yield
- 75% yield
- 68% yield