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**Presentation Requested: oral**

**Category: Evolution of the Interstellar Medium and Star formation over Cosmic Time**

**Question:** Is there a common Schmidt-Kennicutt law at all redshifts and all scales? How is this "law" affected by different measurement limitations or conversion factors from tracer molecules or emission / absorption lines to amounts of gas and SFR?

### **Star Formation in Extreme Environments What Blue Compact Dwarfs Can Tell Us About Star Formation at High Redshift**

To understand the evolution of star formation over cosmic history, one needs to understand how star formation proceeds in environments with the high star formation rate surface densities and low metallicities found in star-forming galaxies at higher redshifts. Although not perfect analogues, blue compact dwarf (BCDs) galaxies have star formation rate surface densities and metallicities similar to star-forming galaxies at higher redshifts providing the opportunities to study star formation under these conditions in greater detail than would be possible with higher redshift observations. In this talk, I will present the results of ALMA cycle 1 observations to examine the molecular hydrogen (as traced by CO) and dust content of the prototypical nearby blue compact dwarf galaxy II Zw 40. I will compare the size, line width, and mass of the CO clumps in II Zw 40 with those found in other galaxies as well as the dust mass and dust-to-gas ratio. I will conclude with how the the results of these observations can inform observations and theory at higher redshift.