

## Aerosol-Assisted Chemical Vapor Deposition of 2H-WS<sub>2</sub> From Single-Source Tungsten Dithiolene Precursors

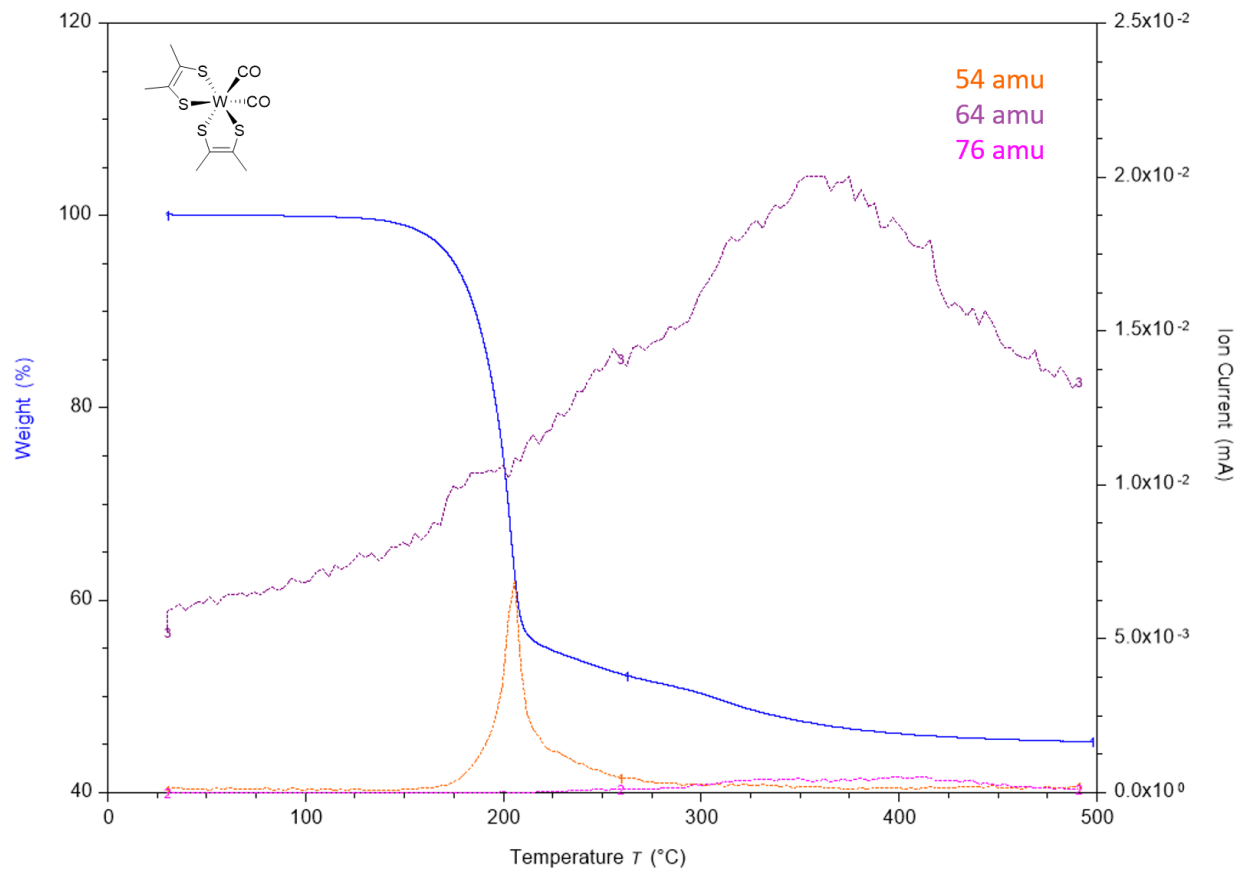
Ian M. Germaine, Nathaniel E. Richey, Mary B. Huttel and Lisa McElwee-White\*

Department of Chemistry, University of Florida, Gainesville, FL 32611-7200 USA

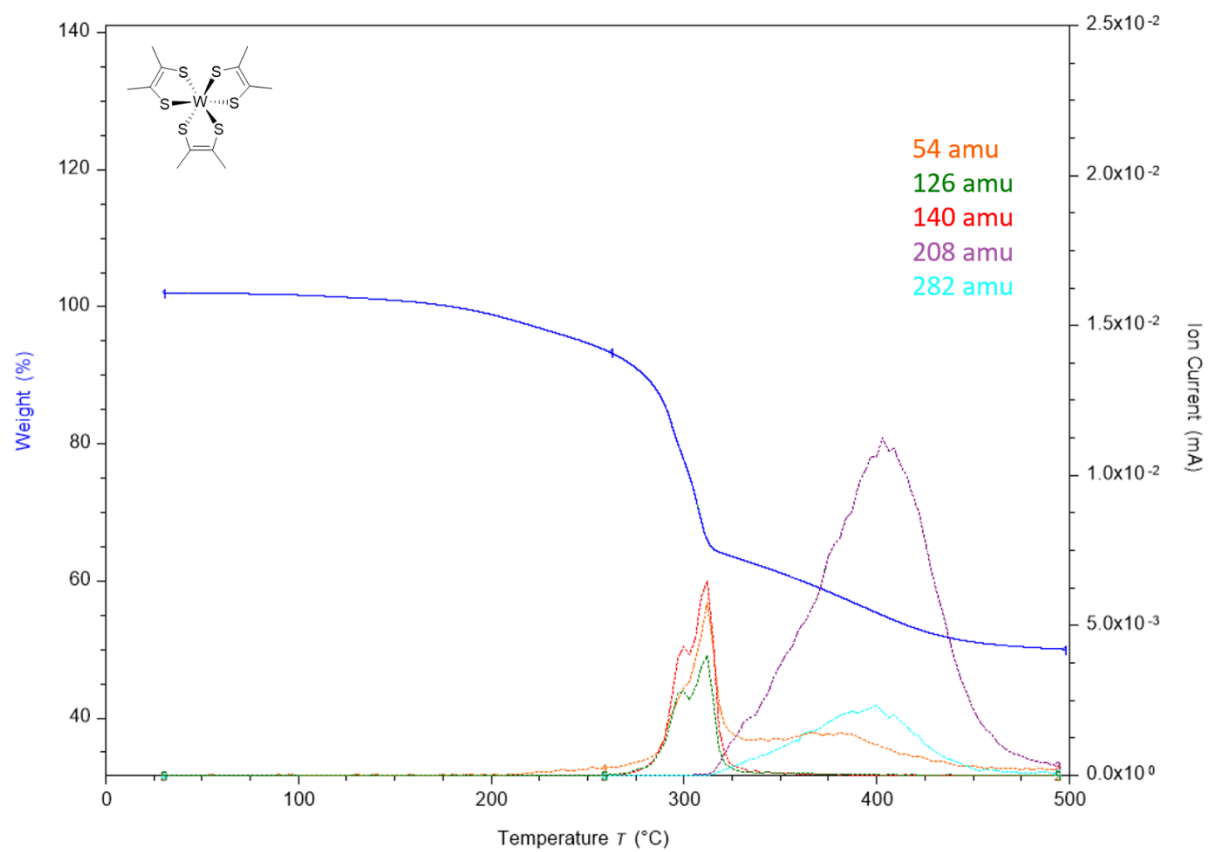
### *Electronic Supplementary Information*

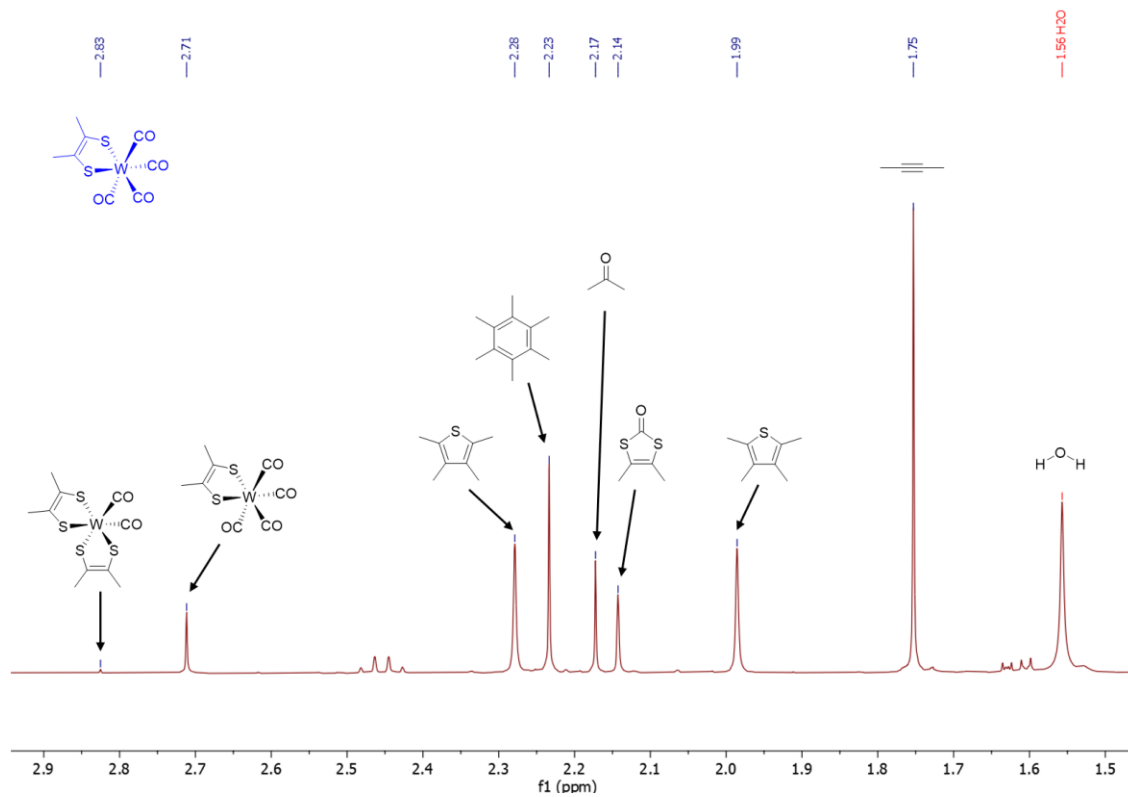
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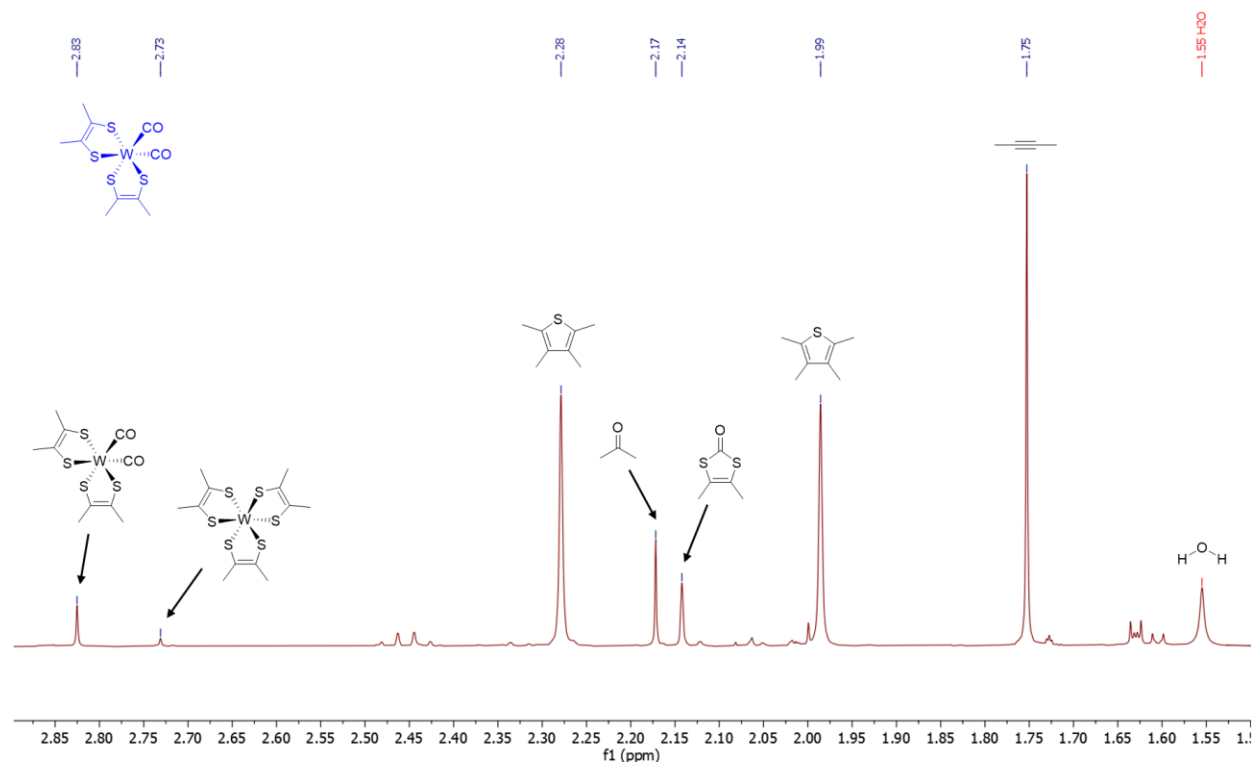


**Figure S-1.** TGA-MS overlay for **2**. The blue curve is the TGA trace for **2** (structure in top left).

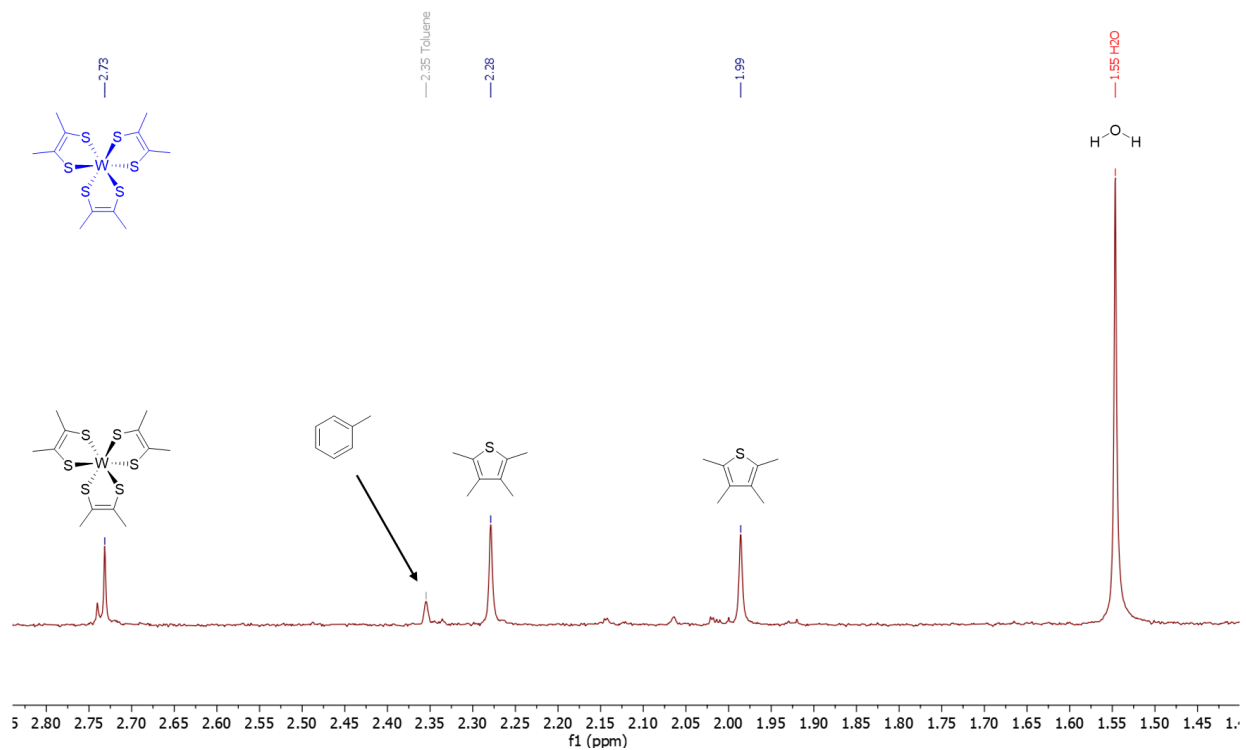




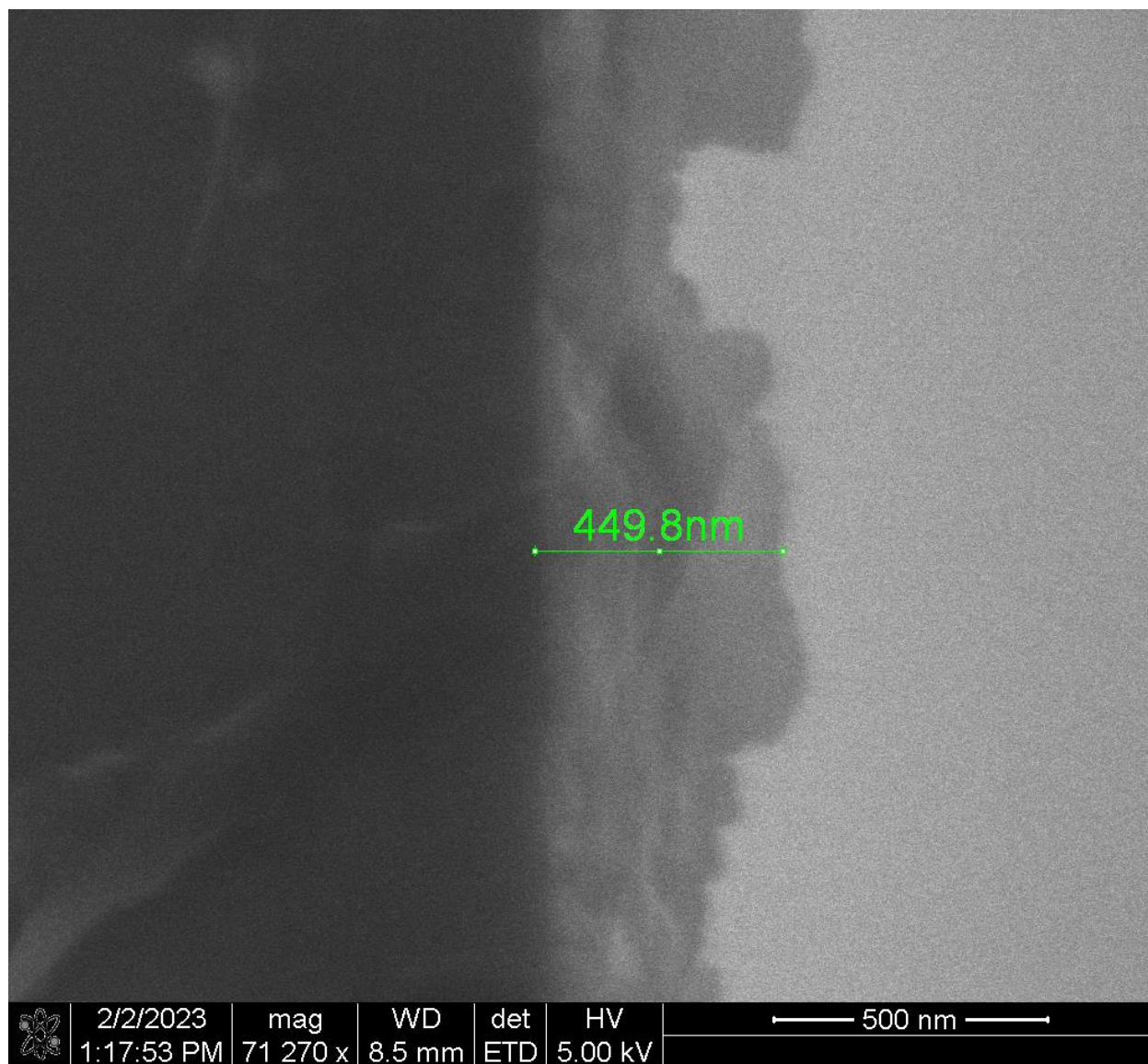
**Figure S-3.** <sup>1</sup>H NMR spectrum (CDCl<sub>3</sub>, 400 MHz) of the pyrolysis condensate from **1**. The structure of **1** is in the upper left corner (blue) and the major peaks are identified.



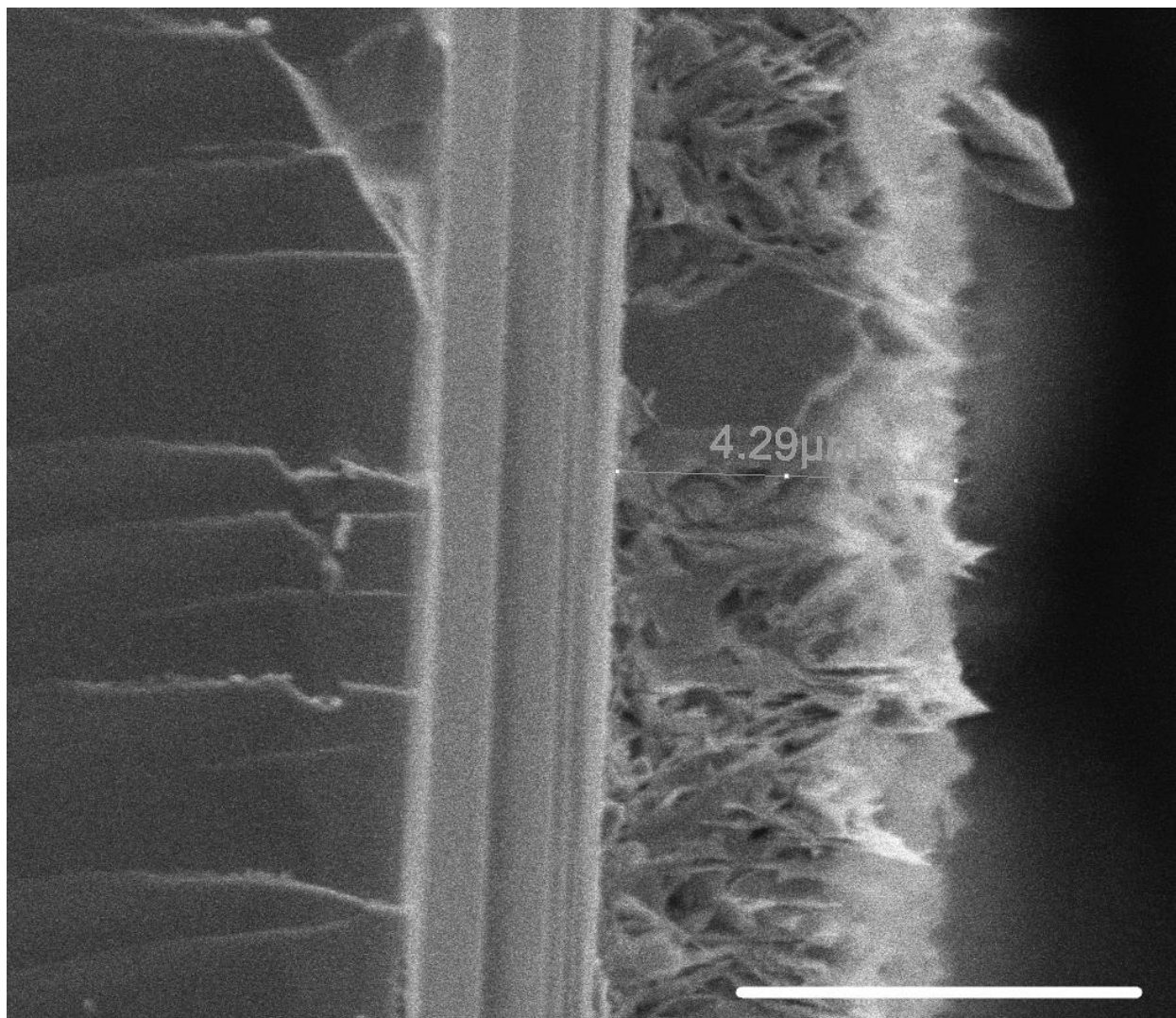
**Figure S-4.**  $^1\text{H}$  NMR spectrum ( $\text{CDCl}_3$ , 400 MHz) of the pyrolysis condensate from **2**. The structure of **2** is in the upper left corner (blue) and the major peaks are identified.



**Figure S-5.**  $^1\text{H}$  NMR spectrum ( $\text{CDCl}_3$ , 400 MHz) of the pyrolysis condensate from **3**. The structure of **3** is in the upper left corner (blue) and the major peaks are identified.

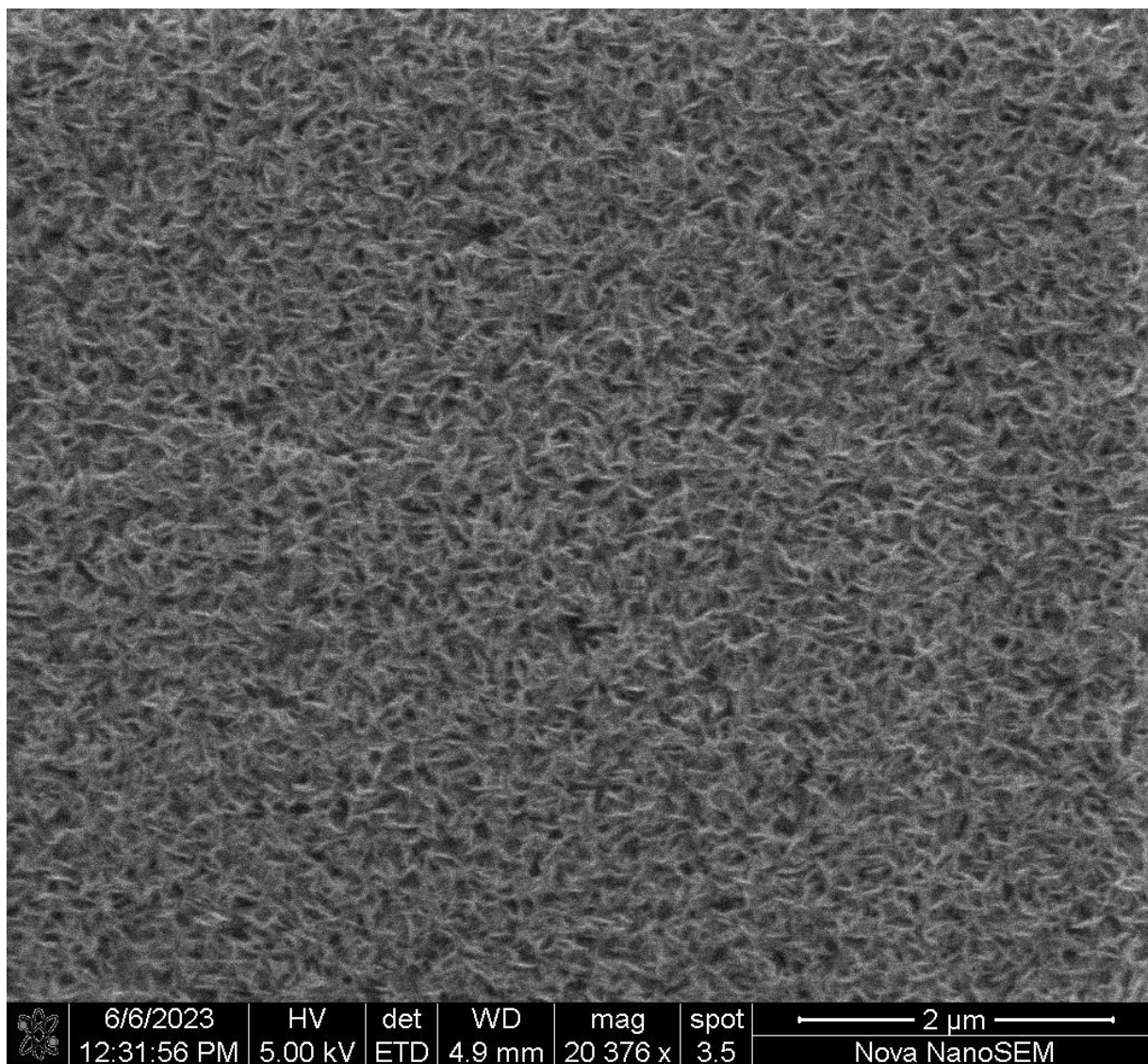


**Figure S-6.** Cross-sectional SEM of the image deposited from **3** at 400 °C.

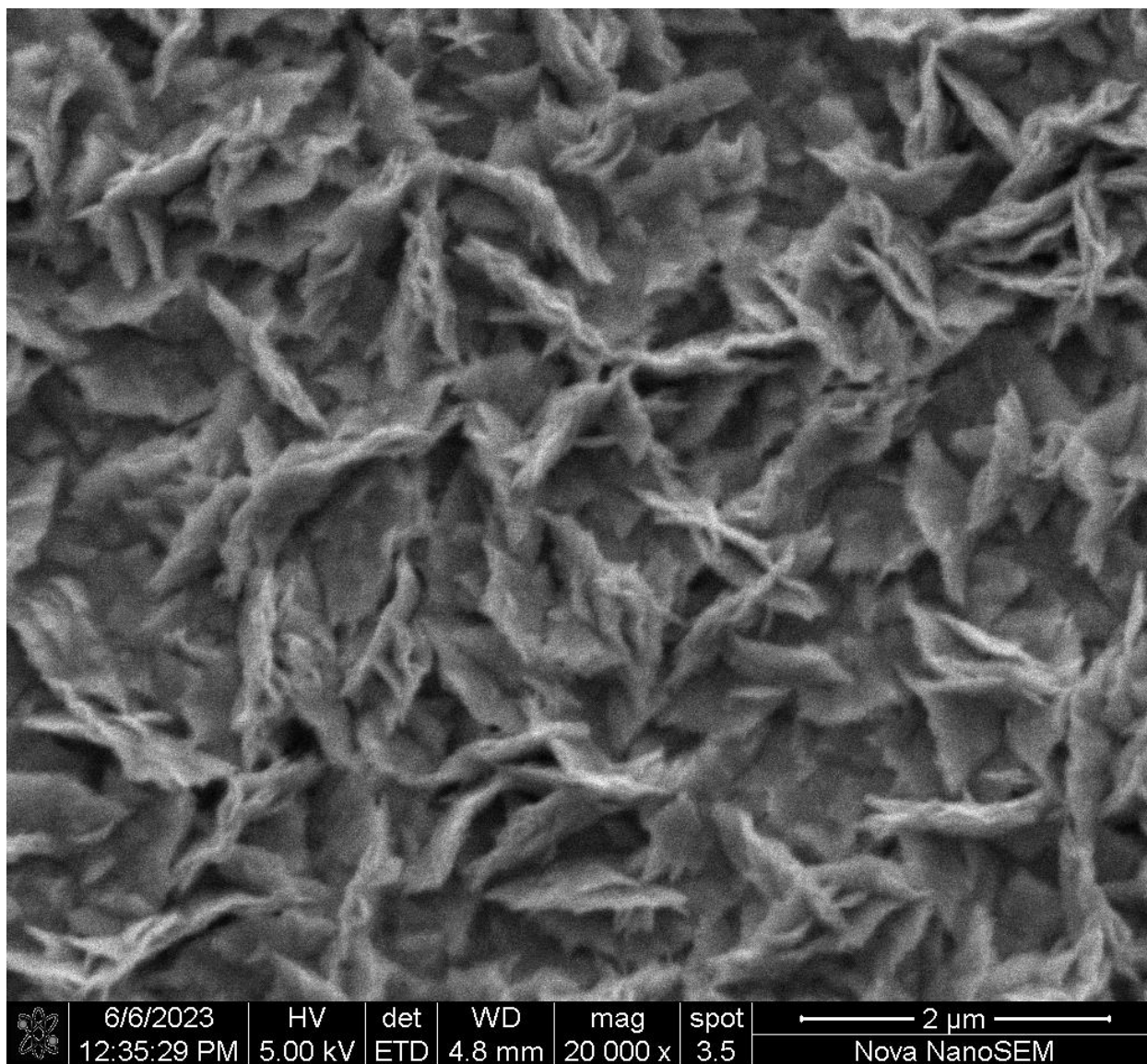


**Figure S-7.** Cross-sectional SEM image of the film deposited from **3** at 600 °C. The white scale bar in the bottom right is 5 μm in length. The measured film thickness was 4.29 μm.





**Figure S-8.** Plane view SEM of the film deposited from **3** at 400 °C.



**Figure S-9.** Plane view SEM of the film deposited from **3** at 500 °C.