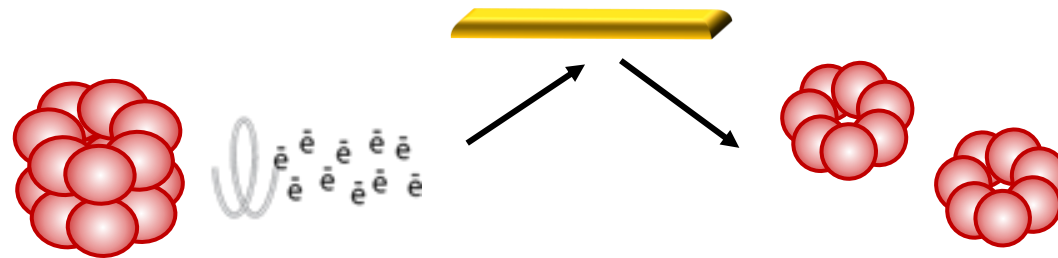




# A Hybrid ECD-SID Device Enhances Top-Down and Structural Characterization of Native Protein Complexes

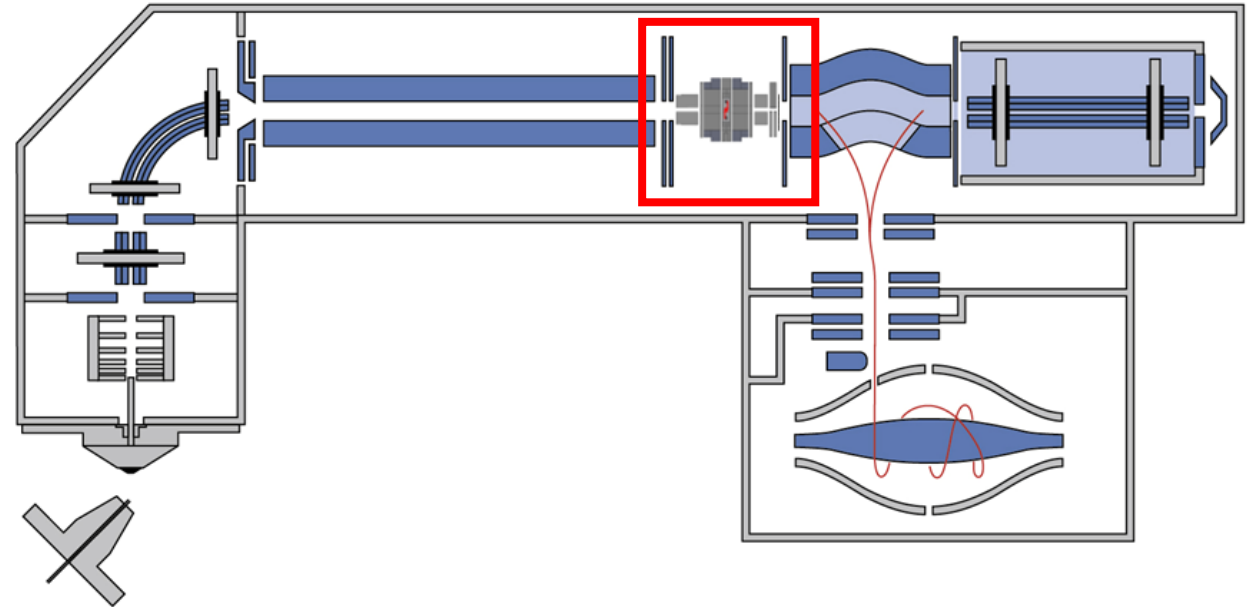
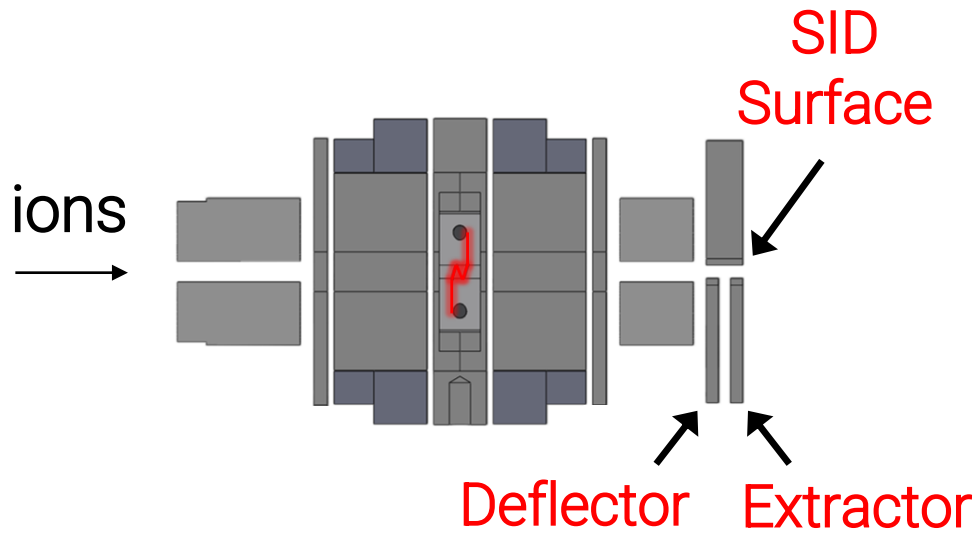
Chen Du

Wysocki Research Group



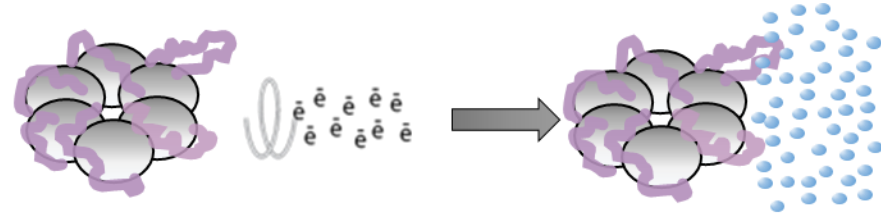
# ECD SID in Orbitrap UHMR

ExD-SID Cell



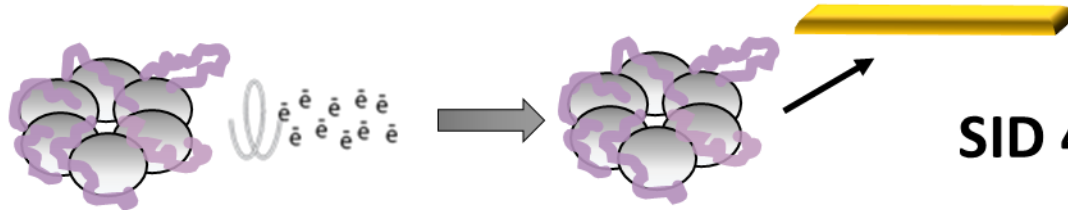
Credit: Dr. Jared B. Shaw

# ECD-SID enhances native top-down characterization



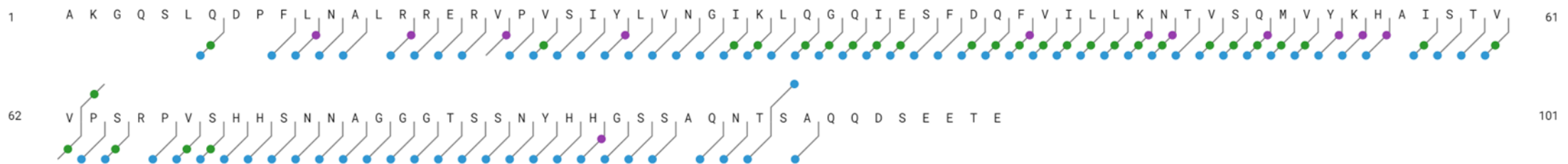
**HCD 45 V**

**Sequence coverage 58%**



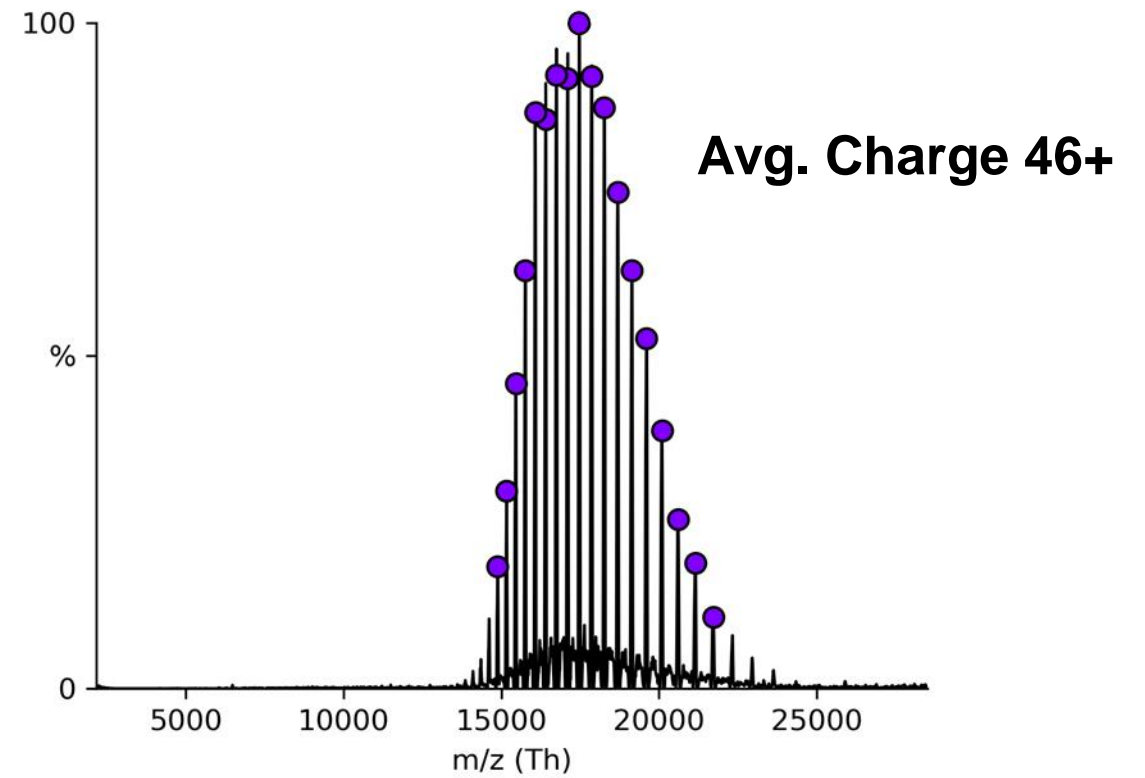
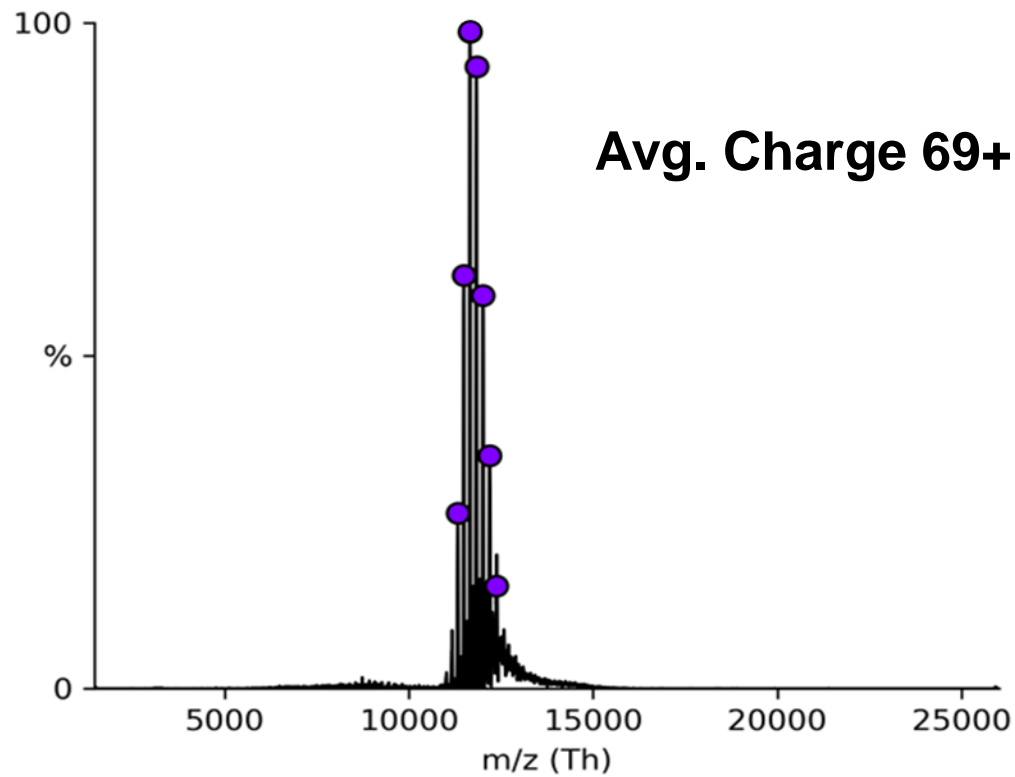
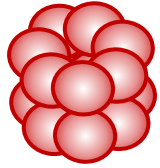
**SID 40 V + HCD 45V**

**Sequence coverage 80%**



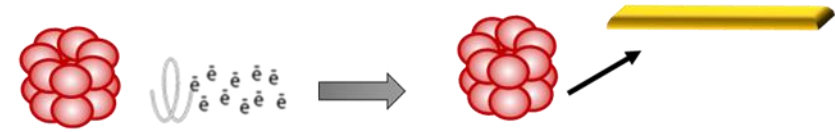
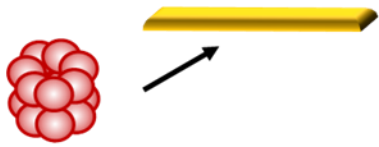
Data processed using Viewer (e-MSion, Inc.)

# ECD reduces charge state in gas-phase

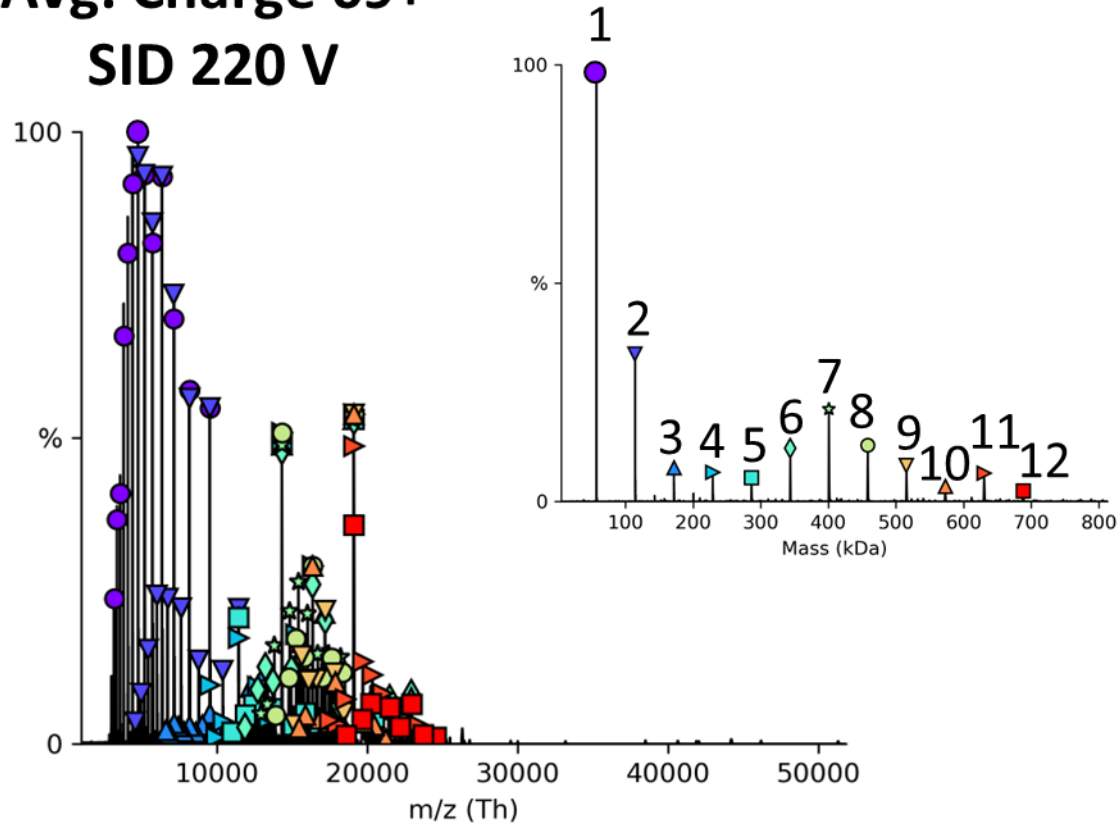


Data processed using UniDec (Marty et al. Anal. Chem., 2015, 87, 4370-4376.)

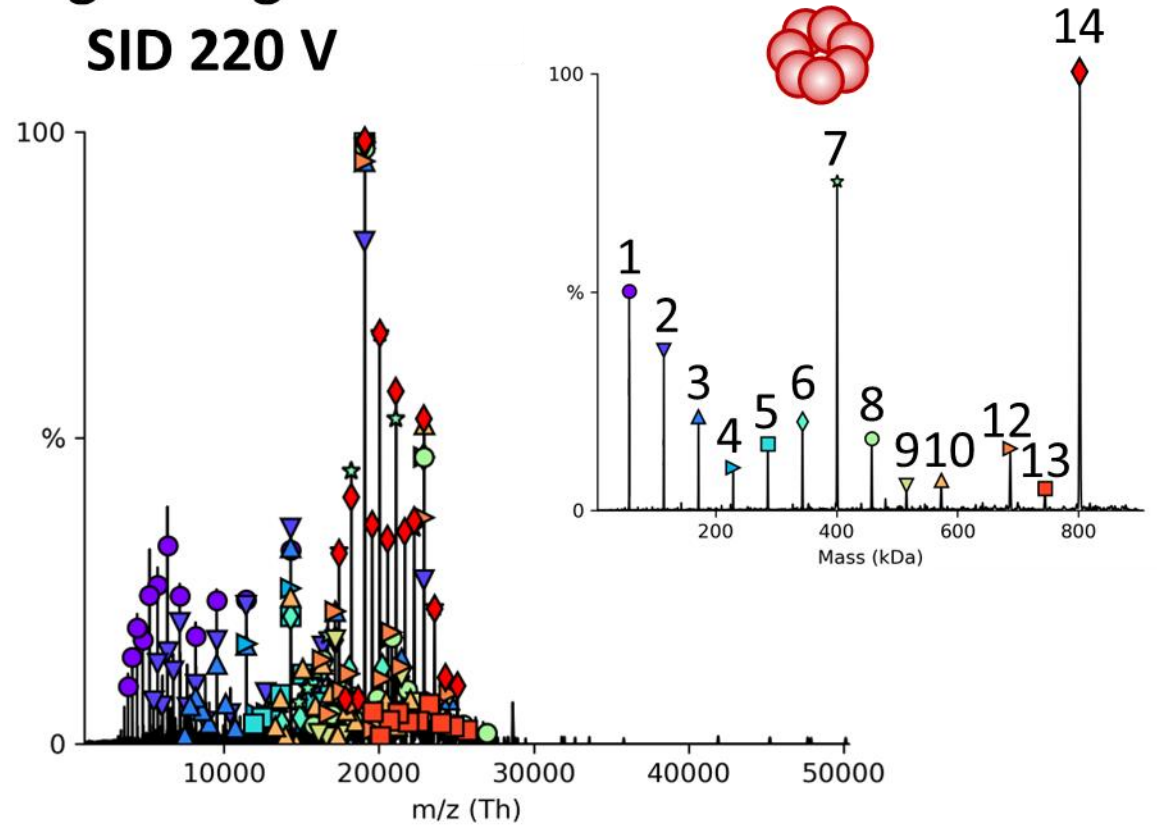
# ECD-SID produces structurally informative subcomplexes



**Avg. Charge 69+**  
**SID 220 V**



**Avg. Charge 46+**  
**SID 220 V**



Data processed using UniDec (Marty et al. Anal. Chem., 2015, 87, 4370-4376.)

# Acknowledgment

## ❖ Wysocki Research Group (OSU)

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❖ Dr. Yury V. Vasil'ev

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More ECD-SID:  
Oral  
Vicki Wysocki  
**TOB 08:30 am**  
Room L100

Poster  
Jared Shaw  
**WP 176**



[nativems.osu.edu](http://nativems.osu.edu)