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# 国台学术报告 NAOC COLLOQUIUM

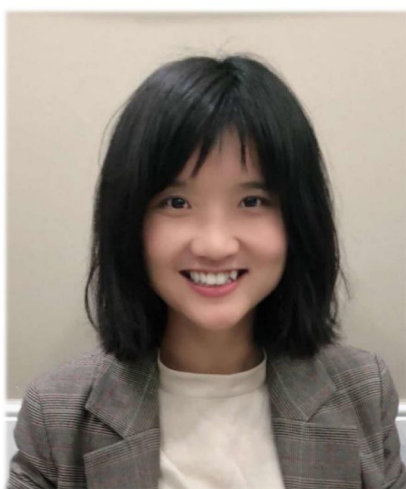
2021 年 第 6 次 / No. 6 2021

Time: **Wednesday 2:30 PM, Apr.7th** Location: **A601, NAOC**

## Molecules Rotating on Earth and in Space: Laboratory Spectroscopic Strategies

**Dr. Qian Gou**

**Chongqing University**



Dr. Qian Gou got her Ph.D. in physical chemistry at the University of Bologna (Italy) in 2014. She continued the research on rotational spectroscopy at the University of Bologna as a research assistant. In May 2015, Dr. Gou was funded by “100 Young Chongqing University” and became an appointed research professor at Chongqing University, China. There she contributed to set up the first Fourier transform microwave spectrometer in China. Her research interest is focused on molecular conformational behaviors, non-covalent interactions, and molecules of interstellar interest with high resolution

molecular spectroscopy complemented with theoretical calculations. Till now, Dr. Gou has more than 90 academic publications in international peer-reviewed journals. She has received 3 research funds as PI from the National Natural Science Foundation of China and is funded by Chongqing Youth Talent Support Program.

### Abstract

Rotational spectroscopy is arguably the most accurate high-resolution molecular spectroscopic technique due to its high sensitivity to mass distributions of molecules. It provides unique insights into the structures of molecules that are reflected in rotational constants. Molecules, previously examined in the laboratory, can be identified in interstellar space with the help of radio telescopes. In this talk, with the recent results we have obtained, the possibilities and challenges in rotational studies of isolated molecules and molecular complexes, particularly with interstellar interests, will be presented.

