

# Publications & Patents

Saurabh Kumar Singh

## Patents

1. **Saurabh Kumar Singh**, Avinash Kumar, and Pranav R. Shirhatti. *A multistage thermal drift compensated cross-fringed Fizeau interferometer wavemeter and method thereof*. **Patent:** Indian App. No. 202321048766, filed on 20-Jul-2023, TIFR.

## Publications

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1. **Saurabh Kumar Singh**, and Pranav R. Shirhatti. *Dissociation Dynamics of CO<sub>2</sub> on Cu(110) Studied over a Wide Range of Incident Energies*. **The Journal of Physical Chemistry C** **128**, 49, 20841–20848 (2024).
2. **Saurabh Kumar Singh**, and Pranav R. Shirhatti. *The Curious Case of CO<sub>2</sub> Dissociation on Cu(110)*. **The Journal of Chemical Physics** **160.2**, 024702 (2024).
3. **Saurabh Kumar Singh**, Avinash Kumar, and Pranav R. Shirhatti. *A Simple and Low-Cost Setup for Part-Per-Billion Level Frequency Stabilization and Characterization of Red He-Ne Laser*. **HardwareX** **14**, e00421 (2023).
4. Geetika Bhardwaj, **Saurabh Kumar Singh**, and Pranav R. Shirhatti. *A Compact and Highly Collimated Atomic/Molecular Beam Source*. **Review of Scientific Instruments** **94.4** (2023).
5. Avinash Kumar, **Saurabh Kumar Singh**, and Pranav R. Shirhatti. *A Versatile and Narrow Linewidth Infrared Radiation Source for Ro-Vibration State-Selected Preparation of Molecules in Molecular Beams*. **Review of Scientific Instruments** **94 (11)** (2023).

## Manuscripts Under Preparation

1. **Saurabh Kumar Singh**, Avinash Kumar, and Pranav R. Shirhatti. *Design and Characterization of a High-Performance Wavemeter Based on Crossed Fringe Fizeau Interferometer (CFFI)*.
2. Amaraja Taur, **Saurabh Kumar Singh**, and Pranav R. Shirhatti. *Identifying Signatures of Thermal and Non-Thermal Reaction Pathways in Plasmon-Induced H<sub>2</sub> + D<sub>2</sub> Exchange Reaction*. ChemRxiv (2021). [doi:10.26434/chemrxiv-2021-87t1c](https://doi.org/10.26434/chemrxiv-2021-87t1c).