

Dr. Sumit Singhal

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Personal Details

Father's Name: Sh. Bhagwan Dass	Date of Birth: 1 st March, 1988
Gender: Male	Marital Status: Married
Last Designation: Postdoctoral Associate	Nationality: Indian
Permanent Address: Nirmal Niwas, Plot 56-A2, S. no. 259, Kalwad Road, Dhanori, Lohegaon Pune, Maharashtra, 411032	

Education

Name of the Exam	Name of College/Board/ University	Year of Passing	% Marks in aggregate
Ph.D (Physical Chemistry)	Indian Institute of Technology Kanpur	2019	8.33(CPI)
M.Sc (Organic Chemistry)	Hindu college, Delhi University	2010	57
B.Sc	Maharshi Dayanand University	2007	60

National level examination qualified

- ❖ Gate 2010
- ❖ Joint CSIR-UGC NET 2010

Awards/Fellowships

- ❖ Junior research fellowship for 2011-2012 (Awarded by UGC India)
- ❖ Senior research fellowship for 2013-2015 (Awarded by UGC India)

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Teaching & Research Experience

Position Held	Name of The Organization	Duration	Subject/Area of Work
Project Associate	Indian Institute of Technology Kanpur	July-Dec 2010	Virtual Lab
Teaching Associate	Indian Institute of Technology Kanpur	2012-2013, 2 nd Sem	CHM 102 (Theory)
Teaching Associate	Indian Institute of Technology Kanpur	2013-2014, 1 st Sem	CHM 423 (Experimental Lab)
Teaching Associate	Indian Institute of Technology Kanpur	2013-2014, 2 nd Sem	CSO 202 (Theory)
PhD	Indian Institute of Technology Kanpur	Dec 2010- June, 2019	Nonlinear Optical Spectroscopy
Postdoctoral	University of Colorado, Boulder	June 2019 – Oct 2021	Multidimensional Fourier Transform Electronic Spectroscopy

Publications

Peer reviewed Journals or Books:

- (1) **Singhal, S.;** Goswami, D. Unraveling the Molecular Dependence of Femtosecond Laser-Induced Thermal Lens Spectroscopy in Fluids. *Analyst* **2020**, 929–938. <https://doi.org/10.1039/c9an01082c>.
- (2) **Singhal, S.;** Goswami, D. Thermal Lens Study of NIR Femtosecond Laser-Induced Convection in Alcohols. *ACS omega* **2019**, 4, 1, 1889-1896. <https://doi.org/10.1021/acsomega.8b02956>.
- (3) **Singhal, S.;** Dinda, S.; Goswami, D. Measurement of Pure Optical Nonlinearity in Carbon Disulfide with a High-Repetition-Rate Femtosecond Laser. *Appl. Opt.* **2017**, 56 (3), 644. <https://doi.org/10.1364/AO.56.000644>.
- (4) Kumar, A.; Kumar, S. K. K.; **Singhal, S.;** Goswami, D. Study of Two Xanthene Dyes Using Spectrally Resolved Three Pulse Photon Echo Spectroscopy. *Curr. Sci.* **2015**, 108 (10), 1801-1803.
- (5) Das, D. K.; Makhal, K.; **Singhal, S.;** Goswami, D. Polarization Induced Control of Multiple Fluorescence from a Molecule. *Chem. Phys. Lett.* **2013**, 579, 45–50. <https://doi.org/10.1016/j.cplett.2013.06.027>.
- (6) Mondal, D.; **Singhal, S.;** Goswami, D. Femtosecond Laser-Induced Photothermal Effect for Nanoscale Viscometer and Thermometer. In *Selected Topics in Photonics*; **2018**; Vol. 75, pp 13–17. https://doi.org/10.1007/978-981-10-5010-7_2
- (7) Gupta, R.K.; Verma, S.; **Singhal, S.;** Suyrakant; Goswami, D. Investigating the effects of intermolecular interactions on nonlinear optical properties of binary mixtures with high repetition rate femtosecond laser pulses. *PeerJ Physical Chemistry*, **2022** (Accepted).

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Conference proceedings:

- (1) Goswami, S.; **Singhal, S.**; Banerjee, A.; Goswami, D. Sensitive Detection of Phase Separation with Femtosecond Thermal Lens Spectroscopy. In *2019 Workshop on Recent Advances in Photonics (WRAP)*; IEEE, 2019; pp 1–2. <https://doi.org/10.1109/WRAP47485.2019.9013833>.
- (2) **Singhal, S.**; Goswami, D. Sensitive Dual Beam Thermal Lens Detection of Convection in Methanol. In *13th International Conference on Fiber Optics and Photonics*; OSA: Washington, D.C., 2016; p P1A.16. <https://doi.org/10.1364/PHOTONICS.2016.P1A.16>.
- (3) **Singhal, S.**; Roy, P. P.; Goswami, D. Importance of Hydrogen Bonding in Thermal Lens Study of Highly Absorbing Liquids. *Front. Opt.* **2015**, FTu5E--5.
- (4) **Singhal, S.**; Bhattacharyya, I.; Goswami, D. Exploring the Critical Role of Detection Aperture in Thermal Lens Measurements. In *2015 Workshop on Recent Advances in Photonics (WRAP)*; IEEE, 2015; pp 1–4. <https://doi.org/10.1109/WRAP.2015.7806016>.
- (5) Maurya, S. K.; **Singhal, S.**; Goswami, D. Study of Self Defocusing in Liquids Using Single Beam Z-Scan with High Repetition Rate Laser Pulses. *2012 Int. Conf. Fiber Opt. Photonics, PHOTONICS 2012* **2012**, 2–4.

Conferences/Workshops Attended

- ❖ Dynamics of Complex Chemical and Biological System (DCCBS14), IITK
- ❖ International Symposium on Advances in Spectroscopy and Ultrafast Dynamics (ASUD 2014), IACS Kolkata
- ❖ Temporally and Spatially Resolved Molecular Sciences, Faraday Discussion 177, IISC Bangalore
- ❖ IEEE Workshop on Recent Advances in Photonic (WRAP) 2015
- ❖ 2015 Frontiers in Optics/Laser Science San Jose, California, USA

Language Known

- ❖ English
- ❖ Hindi

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Programming Skills

- ❖ Python
- ❖ Fortran
- ❖ LabVIEW
- ❖ OriginLAB

Declaration: I do hereby declare that all the statements made above are correct. In the event of any information being found false, incomplete, or incorrect, then I will be responsible for that.



Signature

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REFERENCES:

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