List of Publications

Sajal Kumar Giri

Feb 21, 2025

16. "Plasmon dynamics in nanoclusters: Dephasing revealed by excited states evaluation", A. O. Bhasin, Y. S. Ceylan, A. D. Dillon, **S. K. Giri**, G. C. Schatz, and R. L. M. Gieseking
J. Chem. Theory Comput. 21, 17 (2025) DOI

15. "Modeling surface-enhanced Raman scattering of Au-pyrazine and Au-pyrazine-Au nanorod dimer systems with the DFTB method", **S. K. Giri**, and G. C. Schatz
J. Phys. Chem. C 128, 19270, (2024) DOI

14. "Switching of electrochemical selectivity due to plasmonic field-induced dissociation", F. M. Alcorn, **S. K. Giri**, M. Chattoraj, R. Nixon, G. C. Schatz, and P. K. Jain
Proc. Natl. Acad. Sci. (USA) 121, e2404433121 (2024) DOI

13. "Impact of classical and quantum light on donor-acceptor-donor molecules", H. Mandal*, **S. K. Giri***, S. Jovanovski, M. Zagorska, R. Ganczarczyk, T. Chiang, G. C. Schatz, T. Goodson
J. Phys. Chem. Lett. 15, 9493 (2024) [* Equal contribution] DOI

12. "Laser pulse induced second- and third-harmonic generation of gold nanorods with real-time time-dependent density functional tight binding (RT-TDDFTB) method", **S. K. Giri**, and G. C. Schatz
J. Chem. Phys. 161, 044703(2024) DOI

11. "Roadmap on data-centric materials science", S. Bauer, . . ., **S. K. Giri**, . . ., and M. Scheffler
Modelling Simul. Mater. Sci. Eng. 32, 063301 (2024) DOI

10. "Colors of entangled two-photon absorption", O. Varnavski, **S. K. Giri**, T. Chiang, C. J. Zeman IV, G. C. Schatz, and T. Goodson III
Proc. Natl. Acad. Sci. (USA) 120, e2307719120 (2023) DOI

9. "Photodissociation of H_2 on Ag and Au nanoparticles: Effect of size and plasmon versus interband transitions on threshold intensities for dissociation", **S. K. Giri**, and G. C. Schatz
J. Phys. Chem. C 127, 4115 (2023) DOI

8. "Manipulating two-photon absorption of molecules through efficient optimization of entangled light", **S. K. Giri**, and G. C. Schatz
J. Phys. Chem. Lett. 13, 10140 (2022) DOI

7. "Controlling thermodynamics of a quantum heat engine with modulated amplitude drivings", **S. K. Giri**, and H. P. Goswami
Phys. Rev. E 106, 024131 (2022) DOI

6. "Perspectives for analyzing non-linear photo ionization spectra with deep neural networks trained with synthetic Hamilton matrices", **S. K. Giri**, L. Alonso, U. Saalmann, and J. M. Rost
Faraday Discuss. 228, 502 (2021) DOI

5. "Purifying electron spectra from noisy pulses with machine learning using synthetic Hamilton matrices", **S. K. Giri**, U. Saalmann, and J. M. Rost
Phys. Rev. Lett. 124, 113201 (2020) DOI

4. "Nonequilibrium fluctuations of a driven quantum heat engine via machine learning", **S. K. Giri**, and H. P. Goswami
Phys. Rev. E 99, 022104 (2019) DOI

3. "Adiabatic passage to the continuum: Controlling ionization with chirped laser pulses", U. Saalmann, **S. K. Giri**, and J. M. Rost
Phys. Rev. Lett. 121, 153203 (2018) DOI

2. "Geometric phaselike effects in a quantum heat engine", **S. K. Giri**, and H. P. Goswami
Phys. Rev. E 96, 052129 (2017) DOI

1. "Single-photon ionization in intense, fluctuating pulses", **S. K. Giri**, U. Saalmann, and J. M. Rost
J. Mod. Opt. 64, 1004 (2017) DOI

Book Chapters

1. "Plasmon enhanced spectroscopy and photocatalysis", **S. K. Giri**, and G. C. Schatz
Springer, Singapore (2024) DOI

Conference Papers

2. "Getting CO_2 to react is not easy: Hitting it hard with atomic oxygen or with hot electrons", Muwen Yang, **S. K. Giri**, and G. C. Schatz, **VIRT & L-COMM 25**, (2023) DOI

1. "Few-photon strong-field ionization", U. Saalmann, Q. Ning, M. Baghery, **S. K. Giri**, and J. M. Rost, International Symposium on Ultrafast Phenomena and Terahertz Waves, **Optica Publishing Group**, (2018) DOI