

PAPERS FEATURING ROA



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Characterization Experts: Chirality & Biologics

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1. **A hydrogen-bond-stabilized chiral tetrakis Eu(iii) complex with strong circularly polarized luminescence**
Qian, K., Klepetářová, B., Bouř, P., & Wu, T. (2025). Dalton Transactions, 54(48), 17932–17940. <https://doi.org/10.1039/d5dt02294k>
2. **Efficient simulation of Raman Optical activity spectra via molecular tailoring approach**
Sharma, S., & Sahu, N. (2025). Journal of Computational Chemistry, 46(31), e70276. <https://doi.org/10.1002/jcc.70276>
3. **Navigating the transition to remote online examinations in Undergraduate Medical Education in a Resource-Limited Setting: A Student Satisfaction and Perception analysis**
Ali, S., Ali, S. M. H., Saeed, H., Chaudhry, M. F., Khalil, J., & Ahsen, N. F. (2025). Cureus, 17(5), e84480. <https://doi.org/10.7759/cureus.84480>
4. **A simple strategy for measuring the genuine resonance Raman optical activity (RROA) of nonpolar molecules**
Mazurkiewicz, J., Orlef, A., Misiaszek, T., Olszewski, T. K., & Kaczor, A. (2025). Chemical Communications, 61(32), 5954–5957. <https://doi.org/10.1039/d5cc00879d>
5. **Raman optical activity of amyloid fibrils: a distinctive chiroptical phenomenon beyond resonance**
Kołodziejczyk, A., Wajda, A., & Kaczor, A. (2025). Chemical Communications, 61(60), 11118–11130. <https://doi.org/10.1039/d5cc02442k>
6. **Quantum chemical computations of Raman intensities: An ambiguity of the Placzek approximation**
Šebestík, J., & Bouř, P. (2025). Physical Review. A/Physical Review, A, 111(6). <https://doi.org/10.1103/physreva.111.062804>
7. **Chirality-Driven Second Harmonic Generation and Distinctive Modal Raman Optical Activity in SiC–GeC Quantum Nanodots: A Symmetry-Tuned Pathway**
Roy, A., Mondal, D., Ghosal, S., & Jana, D. (2025). The Journal of Physical Chemistry C, 129(35), 15825–15842. <https://doi.org/10.1021/acs.jpcc.5c04181>
8. **At-line determination of the enantiomeric excess in multi-component chiral samples using Raman optical activity (ROA)**
Kwiecień, K., Putyra, P., & Kaczor, A. (2025). Analytica Chimica Acta, 1379, 344727. <https://doi.org/10.1016/j.aca.2025.344727>
9. **Theoretical study of tip-enhanced Raman optical activity for a single chiral molecule**

Tang, Z., Zhang, Y., & Dong, Z. (2025). Optics Communications, 591, 132183.
<https://doi.org/10.1016/j.optcom.2025.132183>

10. Chiral sensing combined with nuclease activity assay to track Cas9 dynamics in solution: ROA and CPL study

Halat, M., Klimek-Chodacka, M., Domagała, A., Zając, G., Oleszkiewicz, T., Kapitán, J., & Baranski, R. (2025). Chemical Communications, 61(38), 6905–6908.
<https://doi.org/10.1039/d5cc00971e>

11. Raman, ROA, and luminescence spectra of chiral lanthanide complexes with L- and D-alanine

Machalska, E., Łyczko, K., Rode, J. E., Dybaś, J., Pałys, B., & Dobrowolski, J. C. (2025). Spectrochimica Acta Part a Molecular and Biomolecular Spectroscopy, 330, 125713.
<https://doi.org/10.1016/j.saa.2025.125713>

12. Black-Box Simulations of Anharmonic Vibrational Chiroptical Spectra: Problems with Property Third Derivatives and the Solvent

Yang, Q., Andrushchenko, V., Hudecová, J., Kapitán, J., Bloino, J., Bowker, I., & Bouř, P. (2025). Journal of Chemical Theory and Computation, 21(20), 10489–10502.
<https://doi.org/10.1021/acs.jctc.5c01132>

13. Monitoring the molecular conformation of individual amphotericin B molecules in an aggregated state by Raman Optical activity

Pajor, K., Zając, G., Fusè, M., Mach-Liszka, M., Arczewska, M., Gagoś, M., Onaka, Y., Fujisawa, T., Unno, M., Baranska, M., & Machalska, E. (2025). Analytical Chemistry, 97(22), 11754–11759. <https://doi.org/10.1021/acs.analchem.5c01198>

14. Raman spectroscopic technologies for chiral discrimination: Current status and new frontiers

Tian, Y., Fang, G., Wu, F., Kauno, J. G., Wei, H., Hsu, H., Li, F., Xu, G., & Niu, W. (2024). Coordination Chemistry Reviews, 526, 216375.
<https://doi.org/10.1016/j.ccr.2024.216375>

15. Chiral generation in achiral lower diamondoid triamantane through prochiral halogen substitution

R, A., Hu, J., & M, U. M. (2025). Journal of Molecular Modeling, 31(7), 190.
<https://doi.org/10.1007/s00894-025-06407-7>

16. Enantioselective Se lattices for stable chiroptoelectronic processing media

Kwon, J., Jeon, J. B., Lee, M. G., Jeong, S., Choi, W. J., Kim, K. M., & Yeom, J. (2025). Nature Communications, 16(1), 4134. <https://doi.org/10.1038/s41467-025-59091-9>

17. Achiral Plasmon Nanostructures for Identifying Single-Walled Carbon Nanotube Enantiomers via Enhancing Their Raman Optical Activity

Lu, F., Zhang, G., Zhang, L., Zhang, Y., Wang, Y., Wang, J., & Zhang, W. (2025). ACS Applied Nano Materials, 8(4), 2000–2005. <https://doi.org/10.1021/acsanm.4c06588>

18. Terahertz Raman optical activity reveals emergent supramolecular chirality in mononucleotide G-quadruplexes

Jílek, Š., Kapitán, J., & Profant, V. (2025). Chemistry - Methods, 5(11). <https://doi.org/10.1002/cmtd.202500070>

19. Symmetry analysis of cross-circular and parallel-circular Raman optical activity

Watanabe, H., Oiwa, R., Kusuno, G., Satoh, T., & Arita, R. (2025). Physical Review. B/Physical Review. B, 112(11). <https://doi.org/10.1103/45jq-j23c>

20. Chiral phonons and anomalous Excitation-Energy-Dependent Raman intensities in layered AGCRP2SE6

Rao, R., Jiang, J., Pachter, R., Mai, T. T., Mohaugen, V., Muñoz, M. F., Siebenaller, R., Rowe, E., Selhorst, R., Giordano, A. N., Walker, A. R. H., & Susner, M. A. (2025). ACS Nano, 19(29), 26377–26387. <https://doi.org/10.1021/acsnano.5c00381>

21. Adaptive excitation frequencies in simulations of resonance Raman spectra

Cheeseman, J. R., & Bouř, P. (2025). The Journal of Chemical Physics, 163(3). <https://doi.org/10.1063/5.0274585>

22. Chiroptical spectroscopy complemented by quantum chemical calculations accurately predicts the absolute configuration of P-chirogenic compounds

Pazderková, M., Králík, F., Kocek, H., Tichotová, M. C., Tučková, L., Bednářová, L., & Procházková, E. (2025). Spectrochimica Acta Part a Molecular and Biomolecular Spectroscopy, 330, 125674. <https://doi.org/10.1016/j.saa.2024.125674>

23. Chiral Cobaltabis(dicarbollide) Catalysts Prepared Using a Silica Helical Nanoplatfrom for the Enantioselective Photooxidation of Aromatic Secondary Alcohols

Nlate, S., Wang, H., Pouget, E., Morvan, E., Buffiere, S., Daugey, N., Danten, Y., Buffeteau, T., & Oda, R. (2025). Chemistry - a European Journal, 31(37), e202501213. <https://doi.org/10.1002/chem.202501213>

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Hanasaki, K., De Jong, T. F., Komarov, K., Kumar, R., Mališ, M., Mattiat, J., Hernandez-Segura, L. I., Schreder, L., Sinyavskiy, A., & Luber, S. (2025). The Journal of Physical Chemistry A, 129(32), 7313–7344. <https://doi.org/10.1021/acs.jpca.5c02969>

25. Fully Atomistic Modeling in Computational Spectroscopy: Tryptophan in Aqueous Solution as a Test Case

Trinari, M., Sepali, C., Giovannini, T., & Cappelli, C. (2025). The Journal of Physical Chemistry A, 129(45), 10323–10338. <https://doi.org/10.1021/acs.jpca.5c04511>

26. Comprehensive assessment of the role of spectral data pre-processing in spectroscopy-based liquid biopsy

Vrtělka, O., Králová, K., Fousková, M., & Setnička, V. (2025). Spectrochimica Acta Part a Molecular and Biomolecular Spectroscopy, 339, 126261. <https://doi.org/10.1016/j.saa.2025.126261>

27. All-Dielectric Metalens for Efficient Chiral Characterization

Bo, B., Ji, Z., Jiang, X., Zhang, Y., Liu, Z., Song, Q., & Xiao, S. (2025). Small Structures, 6(9). <https://doi.org/10.1002/sstr.202500074>

28. Raman, ROA, and luminescence spectra of chiral lanthanide complexes with L- and D-alanine

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