

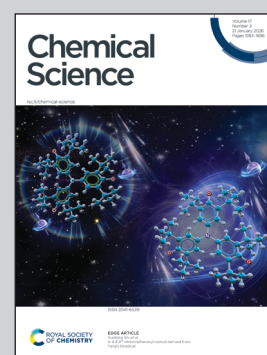
Showcasing research from Professor Popp's laboratory, Institute of Physical Chemistry, Friedrich-Schiller University of Jena and Leibniz Institute of Photonic Technology, Jena, Germany.

Unveiling the molecular dynamics of a nitrile-containing 5-lipoxygenase-activating protein antagonist in primary macrophages through Raman spectroscopy

This work presents a strategy to track the intracellular fate of a nitrile-tagged 5-lipoxygenase-activating protein (FLAP) antagonist using Raman microscopy. The nitrile group of the anti-inflammatory drug candidate BRP-685 modulates its pharmaceutical properties while simultaneously serving as a highly selective vibrational label for spontaneous and stimulated Raman imaging. This dual functionality enables label-free visualization of BRP-685 distribution in differently polarized primary macrophages, allowing unbiased investigation of its subcellular localization after uptake and direct comparison with classical lipid analogues.

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As featured in:



See Juergen Popp *et al.*, *Chem. Sci.*, 2026, **17**, 1613.