

石橋孝章 (いしばしたかあき)

【研究課題名】全内部反射ラマン・振動 SFG 分光システムの構築と固液界面への応用



筑波大学数理物質系 教授

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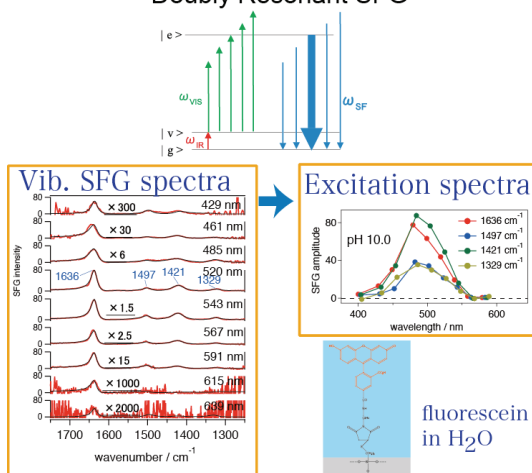
【専門】分子分光学

【キーワード】SFG 分光、ラマン分光、表面界面、固液界面

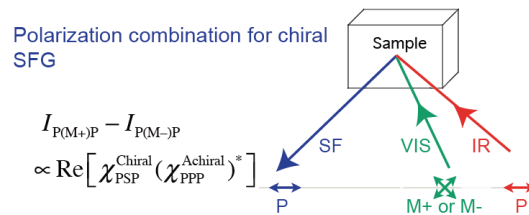
固体-液体界面を観測するための高感度な全内部反射ラマン・振動 SFG 分光システムを開発します。両手法の長所を生かし、固体-液体界面における分子構造の詳細な情報を得ることを目指します。

〈研究グループアクティビティー〉

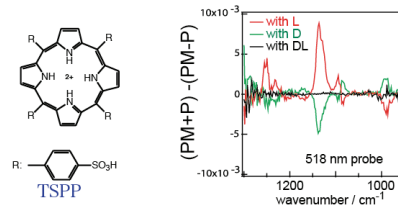
Vibrationally-Electronically
Doubly Resonant SFG



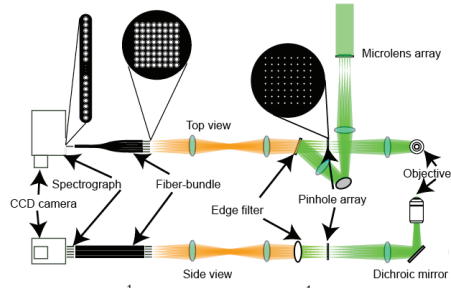
Chiral vibrational SFG spectroscopy



Chiral signal from a thin film of TSPP aggregate formed with use of L- or D-tartaric acid

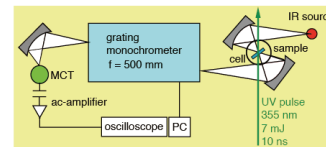


New Raman microspectroscopy
for studying biological systems

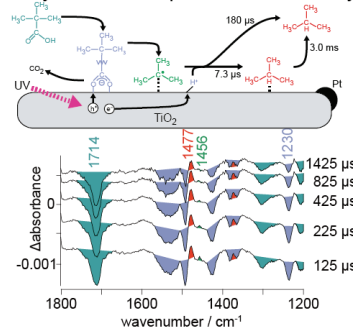


Fast Raman spectral imaging of budding yeast cells by multi-focus confocal Raman microspectroscopy

Nanosecond time-resolved IR

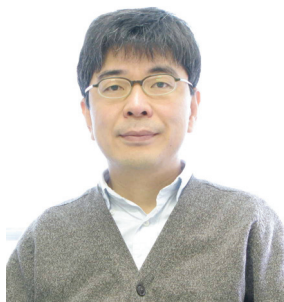


Photocatalytic oxidation process revealed by TRIR



Taka-aki Ishibashi

【Research Subject】 Total internal reflection Raman and VSFG spectroscopies of solid-liquid interfaces



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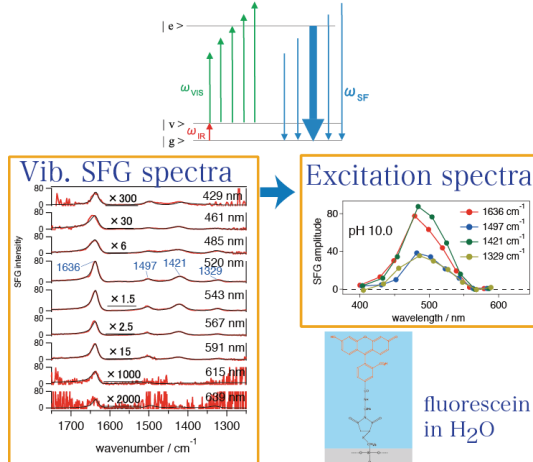
【Speciality】 Molecular spectroscopy

【Keywords】 SFG spectroscopy, Raman spectroscopy, surfaces and interfaces, solid-liquid interfaces

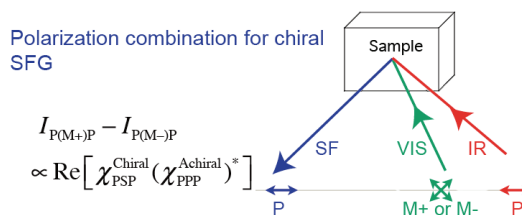
We will construct high-sensitive Raman and vibrational SFG spectroscopic systems that employ the total internal reflection mode. We aim to obtain detailed molecular information at solid-liquid interfaces by exploiting the advantages of the two methods.

Research Group Activity

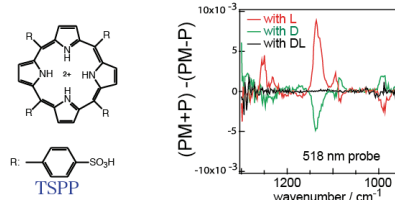
Vibrationally-Electronically Doubly Resonant SFG



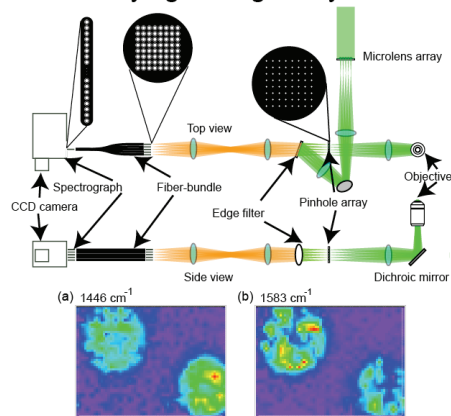
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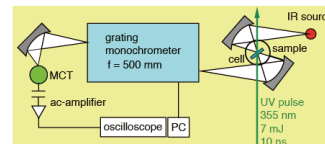


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