

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



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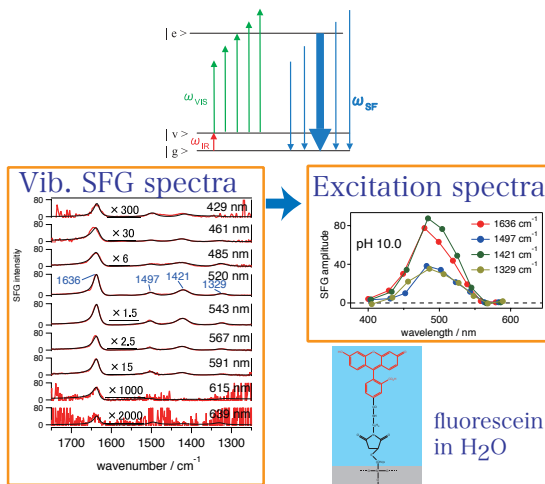
【専門】分子分光学

【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。

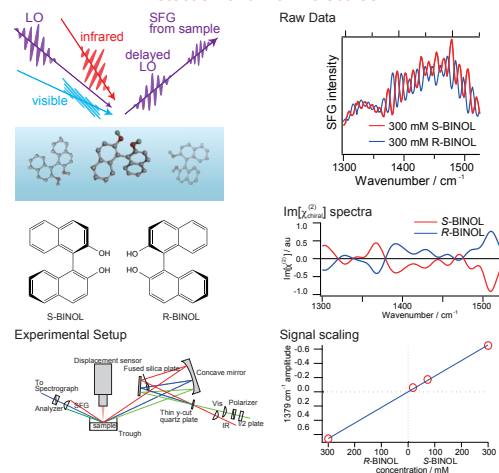
〈研究グループアクティビティー〉

振動電子二重共鳴 SFG 分光

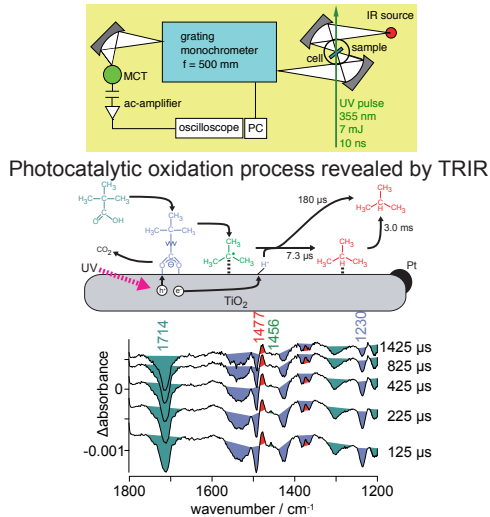


ヘテロダイン検出キラル振動 SFG

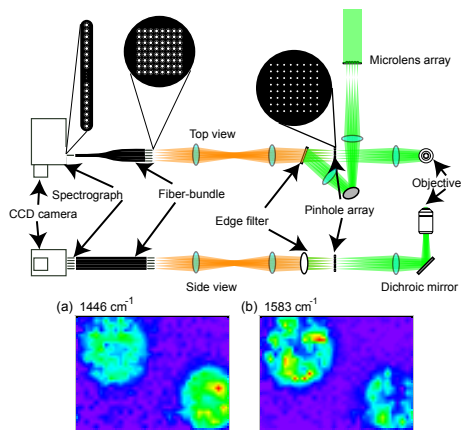
Enantiomer-specific, Quantitative and Sensitive Detection of chiral molecules



ナノ秒時間分解赤外分光



生体系研究のためのラマン顕微分光



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

## Taka-aki Ishibashi

【Research Subject】 Total Internal Reflection Raman and VSGF Spectroscopies of Solid-Liquid Interfaces



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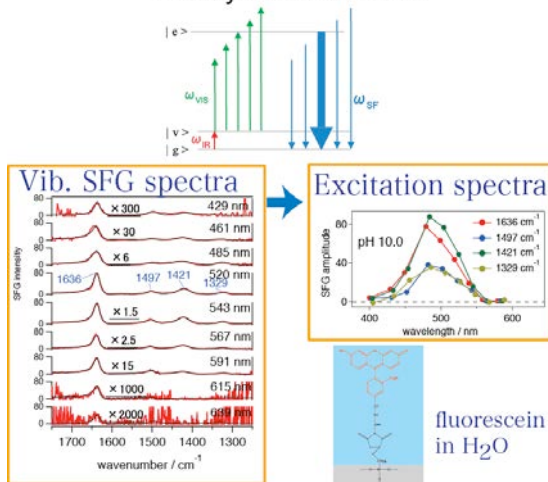
【Speciality】 Molecular spectroscopy

【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.

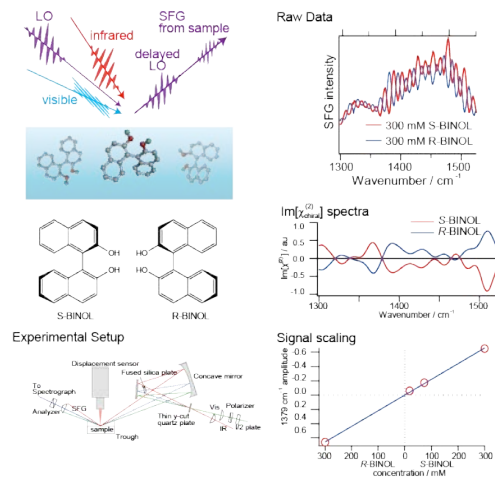
## Research Group Activity

### Vibrationally-Electronically Doubly Resonant SFG

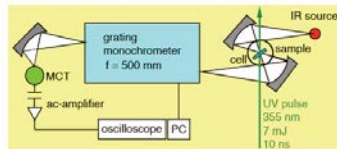


### Heterodyne-Detected chiral VSGF

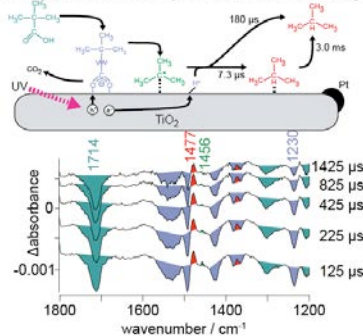
*Enantiomer-specific, Quantitative and Sensitive Detection of chiral molecules*



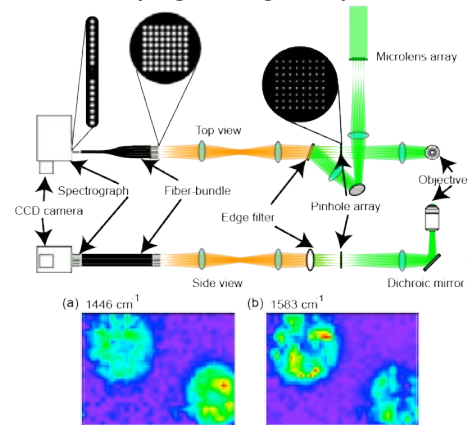
### Nanosecond time-resolved IR



### Photocatalytic oxidation process revealed by TRIR



### Raman microspectroscopy for studying biological systems



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