

# Quantum Chemical Treatment of SFG-Electronic Transition

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Sum-frequency generation spectroscopies have become very popular to study the structures of molecules on the surface and in the interface of condensed phases. The principle of SFG will be discussed. In this talk, two types of electronic Sum-frequency generations, that is, symmetry-allowed and symmetry forbidden transitions will be presented. Temperature effect on band shapes of SFG will be discussed by using carbonyl compounds as examples.

## References

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