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**Femtosecond Coherent Dynamics of Bromine Molecules in Clathrates** ZOE-ELIZABETH SARIYANNI, JILA, University of Colorado, Boulder, CO 80309, V. ARA APKARIAN, Department of Chemistry, University of California, Irvine, CA 92697 — We simulate the dynamics of vibrational coherence in the excited electronic states of bromine molecules enclosed in clathrate hydrates. The molecules are probed by three femtosecond pulses to induce Raman coherence among the vibrational modes of the first excited electronic level and generate Anti-Stokes signal. The theoretical results are compared with the experimental data.

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