

HIGH-RESOLUTION INFRARED STUDY OF THE C_3Te AND TeC_3Te CLUSTERS

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To date, carbon-rich clusters harboring heavy elements have received little attention from both experiment and quantum chemistry. Recent high-resolution infrared survey scans of laser ablation products from carbon-tellurium targets in the $5\mu m$ wavelength regime show two vibration-rotation bands not observed previously. On the basis of comparison with results from density-functional theory and high-level quantum-chemical calculations performed at the CCSD(T) level of theory these bands are attributed to two new linear chains, C_3Te and TeC_3Te .