Master's Thesis Defense
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A Hairpin Resonator Based Flame Ionization Detector for Gas Chromatographs

Date: May 4, 2018

Location: Engineering Building 1, N328

Time: 10 am – 12 pm

Committee Chair: Dr. Ji Chen, Dr. David R. Jackson, Dr. Jiming Bao

A novel hydrocarbon-sensitive detector was investigated to determine if readily achievable sensitivity compares with that of the contemporary flame ionization detector. The targeted application is for use in a gas chromatograph system as a complement to less discriminatory detectors. A series of numerical simulations of the proposed structure were performed to assess the viability of the structure as a detector. An apparatus was developed to test the structure *in situ*. The structure was tested with real-world flame conditions. The measured performance was in very good agreement when compared to the simulated structure. Further experimentation is required to characterize the detector.