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[229] Design of an IRAS Setup to Investigate Adsorbates on Metal-Oxide Single Crystals

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The IRAS system GRISU (GRazing incident Infrared absorption Spectroscopy Unit) was developed for investigations in the research field of single atom catalysis. It combines the commercially available FTIR spectrometer Bruker Vertex 80v with an UHV chamber. The optics placed in HV and UHV was optimised for high throughput. In comparison to a system using two parabolic mirrors ($f=250$ mm) simulations show an about 20 times higher throughput of GRISU when probing the molecular beam spot on the sample. The optical components are mounted precisely in respect to each other to ensure the high performance requirement also after long term use.

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