

„Spectroscopy of heavy alkali metal dimers”

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Group of laser spectroscopy offers a Ph.D. position on laser spectroscopy of diatomic alkali molecules. Ongoing project is focused on investigation of electronic structure of selected electronic states of Rb_2 , Cs_2 and RbCs molecules, including determination of corresponding molecular constants and potential energy curves.

The research methodology is based on a laser polarization labelling spectroscopy technique which allows to record high resolution molecular spectra. The experimental resources in our laboratories include state-of-the art laser systems, detection systems and spectroscopic cells designed for production of specific alkali metal dimers. The numerical Pointwise Inverted Perturbation Approach method developed in our group enables construction of molecular potentials for investigated electronic states basing on experimental spectra, even for states with exotic shapes of potential curves.

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