## 34th M. Smoluchowski Symposium on Statistical Physics



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## **Resonances in Electron Scattering by Molecules**

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The methods of the quantum theory few-body scattering based on the Faddeev-Yakubovsky equations [1] in momentum and configuration space are present [1,2]. Scattering states properties of three-body resonantly interacting particles are considered and are shown to be independent of a form of two-body forces, being determined only presence of resonances. The resonances produce an effective long range interaction between three particles [1-2]. This methods are applied to the calculation of the dissociative electron attachment to hydrogen and hydrogen-halide diatomic initial

rovibrational exiting molecules H<sub>2</sub>, N<sub>2</sub>, Li<sub>2</sub>, Na<sub>2</sub>, HCl, DCl, HBr, DBr, HJ, DJ.

## References:

[1] Faddeev L D and Merkuriev S P 1983 Quantum scattering theory for several particles systems, Kluwer, London.

[2] Pozdneev S A 2001 Application on the quantum theory of few-body scattering to the calculation of the different processes in nuclear, atomic and molecular physics, Moscow, Janus-K.

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