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| Module title | | Abbreviation |
| Theoretical Models in Chemistry | | o8-TC-o82-m01 |
| Module coordinator | | Module offered by |
| lecturer of lecture "Quantenchemie" | | Institute of Physical and Theoretical Chemistry |
| ECTS | Method of grading | Only after succ. compl. of module(s) |
| 3 | numerical grade | -- |
| Duration | Module level | Other prerequisites |
| 1 semester | undergraduate | -- |
| Contents | | |
| <p>This module provides students with deeper insights into advanced topics in quantum chemistry. It focuses on spin, the Pauli principle, Slater determinants, the Hartree-Fock method, correlation energy, configuration interaction and excited states, the Born-Oppenheimer approximation and bonding models of H₂⁺.</p> | | |
| Intended learning outcomes | | |
| Students are able to describe excited states of molecules with the help of key concepts and models. | | |
| Courses (type, number of weekly contact hours, language – if other than German) | | |
| V + Ü (no information on SWS (weekly contact hours) and course language available) | | |
| Method of assessment (type, scope, language – if other than German, examination offered – if not every semester, information on whether module is creditable for bonus) | | |
| a) 1 to 3 written examinations (1 written examination: 90 minutes; 2 written examinations: 60 or 90 minutes each; 3 written examinations: 60 minutes each) or b) oral examination in groups (groups of 2, approx. 30 minutes) | | |
| Allocation of places | | |
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| Additional information | | |
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| Workload | | |
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| Teaching cycle | | |
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| Referred to in LPO I (examination regulations for teaching-degree programmes) | | |
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| Module appears in | | |
| Bachelor' degree (1 major) Chemistry (2008) | | |
| Bachelor' degree (1 major) Mathematics (2008) | | |