

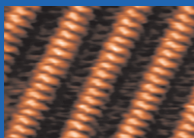


universität**bonn**



# Chemistry in Bonn

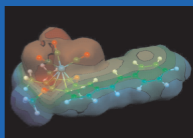




*in-situ* STM



marine natural products



transition metal templates

## Around Bonn

The city of Bonn with a population of nearly 315,000 is not only an exciting metropolitan area and a center of several leading corporate players, but also heads United Nations institutions.

Founded in 1818, the Rheinische Friedrich-Wilhelms-University of Bonn is one of the largest universities in Germany with more than 27,000 students. The university is highly innovative on an international level without negating its traditional roots.

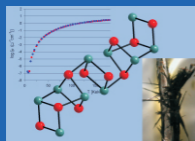


## Chemistry in Bonn

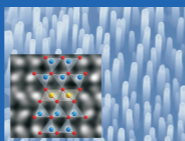
Since the foundation of the University, chemistry has played a significant role. Its history is intimately tied to famous researchers such as August Kekulé and Rudolf Clausius.

Today the department of chemistry hosts 20 different research groups working in all branches of modern chemistry.

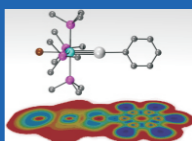




conductive materials



nanostructures



triple bonds to lead

## Research

The chemistry department consists of the Institute of Inorganic Chemistry, the Kekulé Institute of Organic Chemistry and Biochemistry, and the Institute of Physical and Theoretical Chemistry.

The research environment is highly interdisciplinary. Intense collaborations are pursued among the groups, as evidenced by the collaborative research center SFB 624

“Templates - From the Design of Chemical Templates to Reaction Control“.

Post doctoral positions are offered for those, who wish to start a career in academia or industry.

## Research Topics

### Inorganic Chemistry

Catalysis and Quantum Chemistry

Coordination Chemistry

Electron Microscopy

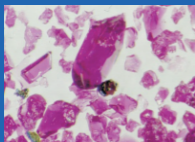
Main-Group Element Chemistry

Nano Materials

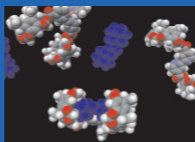
Organometallic Chemistry

Solid-State Chemistry

Transition-Metal Chemistry



oxidation catalysts



allostERIC receptors



MS of complex systems

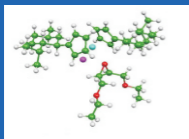
## Research Topics

### Organic Chemistry and Biochemistry

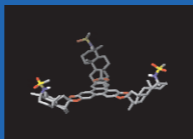
Biochemistry and Natural Products  
Catalysis and Sustainable Chemistry  
New Methodologies in Synthesis  
Organoelectrochemistry  
Organometallics in Synthesis  
Organic Materials  
Polymer Chemistry  
Supramolecular Chemistry and Sensors

### Physical Chemistry and Theoretical Chemistry

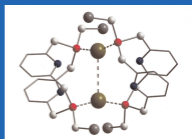
Electrocatalysis  
Development of *ab initio* Methods  
Femtochemistry  
Nanostructuring and Analysis of Surfaces  
Organic Semiconductors  
Quantum-chemical Modelling of Solids and Surfaces  
Single Molecule Spectroscopy  
Theoretical Transition Metal Chemistry



rational catalyst design



molecular templates



N,P-cavitand complex

## Study Programs

### Bachelor's Degree in Chemistry

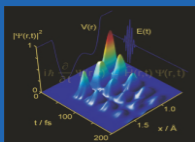
The department of chemistry offers a three-year study program leading to a Bachelor of Science degree (B.Sc.) in chemistry. The subjects covered span the entire range of modern chemistry including inorganic, analytical, organic, physical and theoretical chemistry. The degree is concluded with a scientific thesis, to be completed within three months. All courses are presented in German.

### Master's Degree in Chemistry

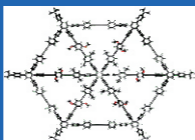
The B.Sc. may be followed by a two-year Master of Science program. The first semester is devoted to advanced subjects. The following two semesters are reserved for specialized courses that can be chosen from the areas of "catalysis", "molecules and mechanisms", "materials" and "biological chemistry". The M.Sc. program concludes with a Master of Science thesis, to be completed within six months. The courses are presented in German and English.

### Ph.D. Program

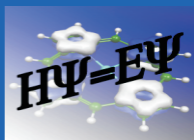
Presently more than 150 students are working towards completion of their Ph.D. theses in the various research groups of the department. These are usually finished within a three year period, and may be written in English. Applicants holding a Master's degree in chemistry are encouraged to apply for a Ph.D. position in Bonn.



fs spectroscopy



molecular spoked wheel



ORCA

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Institute of Inorganic Chemistry  
 and  
 Kekulé Institute  
 of Organic Chemistry  
 and Biochemistry

Institute of Physical  
 and  
 Theoretical Chemistry

