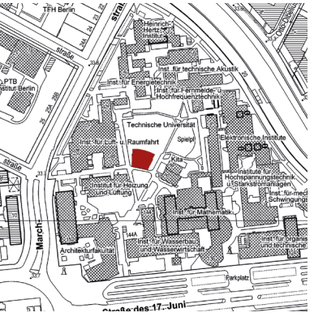
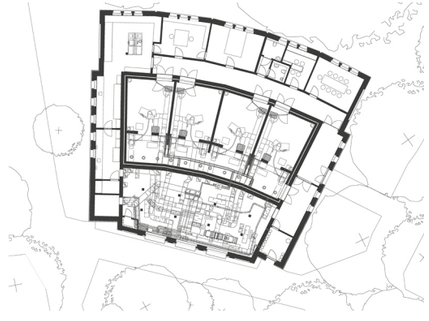
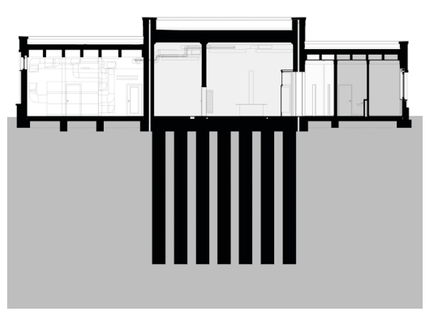


Transmission Electron Microscopy (TEM)
Berlin Charlottenburg

Client: Technische Universität Berlin
Project stages: 1 – 9
Time frame: 2009 – 2011
GFA: 750 sqm
Budget: 3,0 mio. Euro
Site: Marchstraße 10
10587 Berlin





The “TEM” is a highly unusual building: this is where transmission electron microscopy is used to generate images of atoms for fundamental research conducted at Berlin’s Technische Universität. For this reason, the building must meet very strict standards. To protect the microscopes from any vibration that might penetrate from the urban surroundings, the one-metre foundation slab is supported by piles embedded ten metres deep in the ground. A sophisticated climate control system occupying half the building ensures that the temperature does not vary more than 0.1 degrees Celsius per hour. To prevent ground loop, the concrete core of the building is reinforced with fibreglass rather than metal. The walls, floors, and ceilings were made extremely rigid to minimize their natural resonance frequency. The building’s high structural stability is reflected in the straightforward simplicity of the stucco facades and the massive base of natural stone: high-tech research housed in low-tech architecture.