

X-ray microtomography

David Haberthür

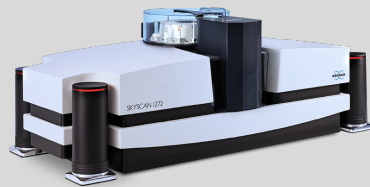
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Grüessech!

- David Haberthür
 - Physicist by trade
 - PhD in high resolution imaging of the lung, Institute of Anatomy, University of Bern, Switzerland
 - Post-Doc I: Tomographic imaging at TOMCAT, Swiss Light Source, Paul Scherrer Institute, Switzerland and working on the detector of the GlobalDiagnostiX project
 - Post-Doc II & currently: Tomographic imaging in the μ CT group, Institute of Anatomy, University of Bern, Switzerland

μ CT-group

- microangioCT [1]
 - Angiogenesis: heart, musculature [2] and bones
 - Vasculature: (mouse) brain [3], (human) nerve scaffolds [4], (human) skin flaps [5] and tumors
- Zebrafish musculature and gills [6]
- (Lung) tumor detection and metastasis classification [7]
- Collaborations with museums [8] and scientist at UniBe [9] to scan a wide range of specimens
- Automate *all* the things! [10]

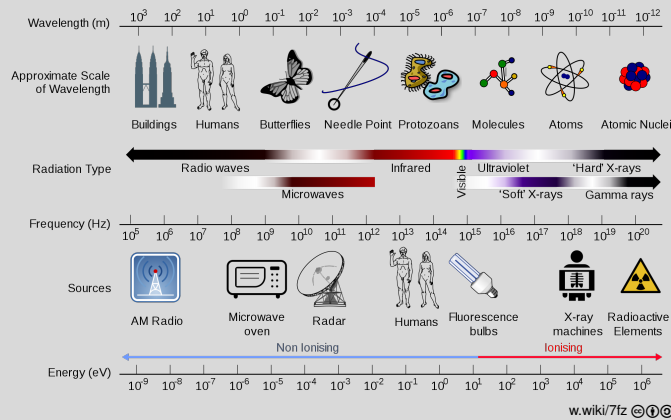


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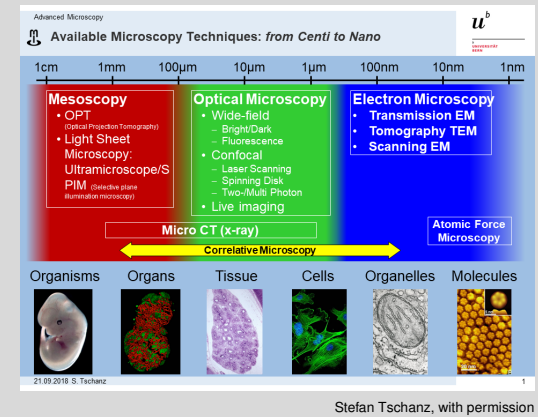
Contents

Imaging

Wavelength and scales



Wavelength and scales



References I

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- [2] Henry Nording u. a. „The C5a/C5a Receptor 1 Axis Controls Tissue Neovascularization through CXCL4 Release from Platelets“. DOI: 10.1038/s41467-021-23499-w.
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- [4] Tsering Wüthrich u. a. „Development of Vascularized Nerve Scaffold Using Perfusion-Decellularization and Recellularization“. DOI: 10.1016/j.msec.2020.111311.
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- [6] Matthias Messerli u. a. „Adaptation Mechanism of the Adult Zebrafish Respiratory Organ to Endurance Training“. DOI: 10.1371/journal.pone.0228333.
- [7] Verdiana Trappetti u. a. „Synchrotron Microbeam Radiotherapy for the Treatment of Lung Carcinoma: A Pre-Clinical Study“. DOI: 10.1016/j.ijrobp.2021.07.1717.

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- [8] Estée Bochud u. a. „A New Diancta Species of the Family Diplommatinidae (Cyclophoroidea) from Vanua Levu Island, Fiji“. DOI: 10.3897/zookeys.1073.73241.
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- [10] David Haberthür u. a. „Automated Segmentation and Description of the Internal Morphology of Human Permanent Teeth by Means of Micro-CT“. DOI: 10.1186/s12903-021-01551-x.