

# Curriculum Vitae – Dr. Jan M. Schuller

## Personal details

Name Schuller  
First name Jan Michael  
Title Dr. rer. nat.  
Date of birth 31.03.1987  
Nationality German  
Family status married, one child (\*2018)

Current Position since 2020 Emmy Noether Group leader  
**Philipps-Universität Marburg (UMR)**  
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Main research fields structural biology, bioenergetics, evolution,  
energy conservation, CO<sub>2</sub> fixation, photosynthesis

## 1. Academic education and qualification

2012 - 2016 PhD/Dissertation, Chemistry (Dr. rer. nat), Technical University Munich  
2010 - 2011 Visiting Researcher, Laboratory of Molecular Electron Microscopy,  
Harvard Medical School Center for Molecular and Cellular Dynamics  
Boston.  
2006 - 2012 Diploma studies Biochemistry, Eberhard Karls University Tübingen

## Professional career

since 2020 Emmy Noether Group Leader, UMR Department for Chemistry  
2016 - 2020 PostDoc, Department of Structural Cell Biology, MPI for Biochemistry

## 2. Miscellaneous

since 2020 Board of Directors of SYNMIKRO, UMR  
since 2020 Member of SYNMIKRO, UMR  
since 2020 Member of IMPRS-MIC, MPI for terrestrial microbiology

### 3. Prizes:

- 2021 Heinz Maier-Leibnitz Price (DFG) Honours scientific achievement with Germany's most important prize for young scientists
- 2021 Daimler and Benz Stipend: "How to build a biological water splitting machine"
- 2020 Emmy Noether grant (DFG), "Structural studies of the prokaryotic carbon concentration mechanism.
- 2017 Junior Scientist Publication Award, Max Planck Society

### 4. Selected Publications:

Publications total: 18, H-index (Google scholar): 11, 1 preprints (Bioarxiv)

# corresponding authors; \* equal contribution

- (1) Zabret J\*, Bohn S\*, Schuller SK, Arnolds O, Möller M, Meier-Credo J, Liauw P, Chan A, Tajkhorshid E, Langer JD, Stoll R, Krieger-Liszkay A, Engel BD, Rudack T#, **Schuller JM**#, Nowaczyk MM# (2020) How to build a water-splitting machine: structural insights into photosystem II assembly. *Nature Plants* (2021)
- (2) **Schuller JM**\* #, Saura P\*, Thiemann J\*, Schuller SK, Gamiz-Hernandez AP, Kurisu G, Nowaczyk MM#, Kaila VRI# (2020) Redox-coupled proton pumping drives carbon concentration in the photosynthetic complex I. *Nature Commun* 11(1):494.
- (3) Albert S, Wietrzynski W, Lee CW, Schaffer M, Beck F, **Schuller JM**, Salomé PA, Plitzko JM, Baumeister W, Engel BD (2019) Direct visualization of degradation microcompartments at the ER membrane. *Proc Natl Acad Sci U S A. Jan 14;117(2):1069-1080.*
- (4) **Schuller JM**#, Birrell JA, Tanaka H, Konuma T, Wulfhorst H, Cox N, Schuller SK, Thiemann J, Lubitz W, Sétif P, Ikegami T, Engel BD, Kurisu G#, Nowaczyk MM# (2019) Structural adaptations of photosynthetic complex I enable ferredoxin-dependent electron transfer. *Science* 363(6424):257-260.
- (5) **Schuller JM**\*, Falk S\*, Fromm L, Hurt E, Conti E (2018) Structure of the nuclear exosome captured on a maturing preribosome. *Science* 360(6385):219-222.
- (6) Snijder J\*, **Schuller JM**\*, Wiegard A, Lössl P, Schmelling N, Axmann IM, Plitzko JM, Förster F, Heck AJ. (2017) Structures of the cyanobacterial circadian oscillator frozen in a fully assembled state. *Science*. 355(6330):1181-1184.

- (7) **Schuller JM**, Beck F, Lösli P, Heck AJ, Förster F (2016) Conformational changes of the AAA+ ATPase p97 revisited. *FEBS Lett.* Mar;590(5):595-604.
- (8) Hite RK, Chiu PL, **Schuller JM**, Walz T. Effect of lipid head groups on double-layered two-dimensional crystals formed by aquaporin-0. *PLoS One.* 2015 Jan 30;10(1):e0117371.
- (9) **Schuller JM\***, Zocher G\*, Liebhold M, Xie X, Stahl M, Li SM, Stehle T (2012) Structure and catalytic mechanism of a cyclic dipeptide prenyltransferase with broad substrate promiscuity. *J Mol Biol* 422(1):87-99.

**Preprints:**

1. Gupta TK\*, Klumpe S\*, Gries K\*, Heinz S\*, Wietrzynski S, Ohnishi N, Niemeyer J, Schaffer M, Rast A, Strauss M, Pitzko JM, Baumeister W, Rudack T, Sakamoto W, Nickelsen J#, **Schuller JM#**, Schroda M#, Engel BD# (2020) Structural basis for VIPP1 oligomerization and maintenance of thylakoid membrane integrity. *Bioarxiv* – under revision at *Cell*