List of peer-reviewed Publications (accepted 12)

a) 1st authorship,
b) Co-author contributions and
c) Corresponding authorship.
Shared 1st authorship are indicated.


8. Richard Börner\textsuperscript{a,c}, Danny Kowerko\textsuperscript{a}, Helena Guiset Miserachs, Michelle F. Schaffer, Roland K.O. Sigel\textsuperscript{c}, \textit{Metal ion induced heterogeneity in RNA folding studied by smFRET}, Coordination Chemistry Review, 2016, 327-328:123-142.


List of Invited Talks (8)

4. "RNA studies with smFRET - A FRET-pair (Cy3/5s) under control" Richard Börner, invited by Christian G. Hübner, University of Lübeck, Lübeck, Germany, June, 2013.

List of Conference Contributions (81)

Author (12 talks, 20 poster) and co-author (49) contributions to scientific conferences (partly published in Journals), after the name of the presenting author the kind of presentation is indicated too.

7. "Time resolved 3D orientation spectroscopy - experimental realisation and simulation"

8. "Single molecule 3D orientation: A multiparameter measurement on PBI"

9. "Group-specific Motion of Single Perylene Bismide Molecules at Interfaces"

10. "Time resolved 3D orientation spectroscopy - experimental realization and simulation"

11. "A theoretical description of the 3D orientation determination of dipoles near interfaces"
    Richard Börner (Poster) and Christian G. Hübner, Abstracts of the DPG spring meeting (DPG e.V.), Dresden, Germany, March, 2011.

12. "Group-specific Motion of Single Perylene Bismide Molecules at Interfaces"

13. "Three-Focus-Fluorescence-Correlation-Spectroscopy"
    Lars Kreutzburg (Poster), Richard Börner and Christian G. Hübner, Abstracts of the DPG spring meeting (DPG e.V.), Dresden, Germany, March, 2011.

14. "Giant unilamellar vesicle (GUV) as model system in advanced 3d orientation determination"

15. "Giant unilamellar vesicle (GUV) as model system in advanced 3d orientation determination"

16. "Giant unilamellar vesicle (GUV) as model system in advanced 3d orientation determination"

17. "Giant unilamellar vesicle (GUV) as model system in advanced 3D orientation determination"

18. "Giant unilamellar vesicle (GUV) as model system in advanced 3D orientation determination"
    Richard Börner (Talk), Nicky Ehrlich and Christian G. Hübner, Membranes in Health and Disease, Gomadingen, Germany, March, 2012.

19. "Characterising the reversibility of of splicing in pre-mRNAs confined in phospholipid vesicles by three colour smFRET spectroscopy"

20. "RNA-Metal Ion Interaction by smFRET"
21. "Close to near physiological conditions – A study under crowded conditions of group II intron ribozyme folding"

22. "Close to near physiological conditions – A study under crowded conditions of group II intron ribozyme folding"

23. "Gene regulation on the RNA level. The B_{12} dependent btuB riboswitch studied with single molecule FRET"

24. "Close to near physiological conditions – A crowding agent study on group II intron ribozyme folding"

25. "MASH: Multifunctional analysis software for heterogeneous smFRET data analysis"

26. "Metal complexes in gene regulation. The B_{12} dependent btuB riboswitch studied with single molecule FRET"
   Richard Börner (Poster), Michelle F. Schaffer, Sofia Gallo and Roland K.O. Sigel, Abstracts of the 2nd Symposium on Functional Metal Complexes that Bind to Biomolecules, COST Action CM1105, Zurich, Switzerland, August 22-23, 2014.

27. "From bulk to single molecule RNA studies: Point mutations reveal specific intra domain interactions essential for group II intron ribozymes folding pathway"

28. "Gene regulation on the RNA level. The B_{12} dependent btuB riboswitch studied with single molecule FRET"

29. "Close to near physiological conditions – A study under crowded conditions of group II intron ribozyme folding"

30. "Close to near physiological conditions – A study under crowded conditions of group II intron ribozyme folding"
   Erica Fiorini (Poster), Richard Börner and Roland K.O. Sigel, Abstracts of the Fall Meeting of the Swiss Chemical Society (SCS), Zurich, Switzerland, September 11, 2014. Published in Chimia, 68, 7-8, 2014.

31. "Gene regulation on the RNA level. The B_{12} dependent btuB riboswitch studied with single molecule FRET"

32. "Global Conformational Changes on the btuB riboswitch as revealed by Small Angle X-ray Scattering (SAXS)"

34. "Post-transcriptional modification of the btuB riboswitch with fluorophores for single molecule FRET Studies."

35. "Multifocus fluorescence correlation spectroscopy"


37. "Unravelling biologically relevant RNA G-quadruplexes: single molecule studies and metal ion dependency"

38. "Study on the folding of a group II intron ribozyme – The effects of crowding agents and mutations"

39. "A macromolecular crowding study of RNA folding and activity – polymer pore size matters"

40. "Carbocyanines revisited – experiment meets simulation"

41. "From bulk to single molecule – Point mutations reveal specific intra domain interactions essential for group II intron folding"
Erica Fiorini (Talk), Lucia Cardo, Richard Börner, Danny Kowerko and Roland K.O. Sigel, Abstracts of the Fall Meeting of the Swiss Chemical Society (SCS), Lausanne, Switzerland, September 4, 2015. Published in Chimia, 69, 7-8, 2015.

42. "Pore size matters - A crowding study of ribozyme folding and activity"
Richard Börner (Poster), Erica Fiorini and Roland K.O. Sigel, Abstracts of the Fall Meeting of the Swiss Chemical Society (SCS), Lausanne, Switzerland, September 4, 2015. Published in Chimia, 69, 7-8, 2015.

43. "Metal ion dependency and multimerization behavior of biologically relevant human RNA G-quadruplexes"
Helena Guiset Miserachs (Poster), Richard Börner, Daniela Donghi, Silke Johannsen and Roland K.O. Sigel, Abstracts of the Fall Meeting of the Swiss Chemical Society (SCS), Lausanne, Switzerland, September 4, 2015. Published in Chimia, 69, 7-8, 2015.

44. "Covalently labeling of the btuB riboswitch with fluorophores for the studies at the single molecule level"
Meng Zhao (Poster), Richard Börner, Roland K.O. Sigel and Eva Freisinger, Abstracts of the Fall Meeting of the Swiss Chemical Society (SCS), Lausanne, Switzerland, September 4, 2014. Published in Chimia, 69, 7-8, 2015.

45. "A macromolecular crowding study of RNA folding and activity: polymer pore size matters!"
Richard Börner, PhD, List of Abstracts: 2007-2018

46. "Carbocyanines and RNA – experiment meets simulation"

47. "A macromolecular crowding study of RNA folding and activity: polymer pore size matters!"

48. "Comprehensive guide to modern methods for processing and analyzing single molecule fluorescence data"

49. "Dissecting carbocyanine photophysics in the context of RNA"  
   Fabio Steffen (Poster), Roland K.O. Sigel and Richard Börner, Förster Resonance Energy Transfer in Life Sciences: FRET 2 meeting, Göttingen, Germany, April 3-6, 2016.

50. "Point mutations reveal specific intradomain interactions essential for group II intron ribozyme folding"
   Erica Fiorini (Poster), Richard Börner, Lucia Cardo, Danny Kowerko and Roland K.O. Sigel, Förster Resonance Energy Transfer in Life Sciences: FRET 2 meeting, Göttingen, Germany, April 3-6, 2016.

51. "Site-specific labeling of large RNA with fluorophores for the application in single molecule FRET studies"
   Meng Zhao (Poster), Fabio D. Steffen, Richard Börner, Roland K.O. Sigel and Eva Freisinger, Förster Resonance Energy Transfer in Life Sciences: FRET 2 meeting, Göttingen, Germany April 3-6, 2016.

52. "A DNA-templated approach for the sequence-specific labeling of adenine bases in single-stranded regions of DNA or RNA"

53. "Single-molecule FRET studies about an encapsulated group II intron"

54. "Site-specific labeling of large RNA with fluorophores for the application in single molecule FRET studies"

55. "Investigation of the interaction between platinum metal complexes and RNA G-quadruplex"

56. "Metal ion interactions in ncRNAs revealed by smFRET"
   Richard Börner (Poster) and Roland K.O. Sigel, Abstracts of the Fall Meeting of the Swiss Chemical Society (SCS), Zurich, Switzerland, September 15, 2016. Published in Chimia, 70, 7-8, 2016.

57. "Extending carbocyanine photophysics to the realm of RNA"
   Fabio F. Steffen (Poster), Roland K.O. Sigel and Richard Börner, Abstracts of the Fall Meeting of the Swiss Chemical Society (SCS), Zurich, Switzerland, September 15, 2016. Published in Chimia, 70, 7-8, 2016.

58. "The MOCO riboswitch from E. coli"
   Fabio Amadei (Poster), Sofia Gallo, Richard Börner and Roland K.O. Sigel, Abstracts of the Fall Meeting of the Swiss Chemical Society (SCS), Zurich, Switzerland, September 15, 2016. Published in Chimia, 70, 7-8, 2016.
59. "Following the splicing process of an encapsulated group II intron by single-molecule FRET"
Richard Börner (Poster), Susan Zelger-Paulus, Melodie C.A.S Hadzic, Richard Börner and Roland K.O. Sigel, Abstracts of the Fall Meeting of the Swiss Chemical Society (SCS), Zurich, Switzerland, September 15, 2016. Published in Chimia, 70, 7-8, 2016.

60. "Investigation of the interaction between platinum metal complexes and RNA G-quadruplex"

61. "Site-specific labeling of large RNA with fluorophores for the application in single molecule FRET studies"
Meng Zhou (Poster), Fabio D. Steffen, Richard Börner, Eva Freisinger and Roland K.O. Sigel, Abstracts of the Fall Meeting of the Swiss Chemical Society (SCS), Zurich, Switzerland, September 15, 2016. Published in Chimia, 70, 7-8, 2016.

62. "Carbocyanines in the realm of RNA – single molecule experiment meets simulation"
Richard Börner (Talk), Fabio D. Steffen and Roland K. O. Sigel, German Biophysical Society meeting (DGF e.V.), Erlangen, Germany, September 25-28, 2016.

63. "Investigation of the interaction between platinum metal complexes and RNA G-quadruplex"

64. "Extending carbocyanine photophysics to the realm of RNA"
Fabio F. Steffen (Poster), Roland K.O. Sigel and Richard Börner, 11th Dorothy Crowfoot Hodgkin Symposium, Zurich, Switzerland, October 3, 2016.

65. "Site-specific fluorescence labeling of large RNA for the application of single molecule FRET"
Meng Zhao (Poster), Fabio D. Steffen, Richard Börner, Michelle F. Schaffer, Eva Freisinger and Roland K.O. Sigel, 11th Dorothy Crowfoot Hodgkin Symposium, Zurich, Switzerland, October 3, 2016.

66. "Following the splicing process of an encapsulated group II intron by single-molecule FRET"

67. "Combining single-molecule and ensemble experiments to disentangle the interplay between RNA folding and splicing"

68. "Following the splicing process of an encapsulated group II intron by single-molecule FRET"

69. "RNA-induced fluorescence enhancement – from experiment to simulation"

70. "A macromolecular crowding study of RNA folding and activity: polymer pore size matters!"

71. "A macromolecular crowding study of RNA folding and activity: polymer pore size matters!"

72. "Following RNA splicing in vitro by single-molecule FRET"
73. "A photophysical study on the interaction between fluorescent platinum(II) complexes and a BCL-2 RNA G-quadruplex"
    
74. "Dynamic insight into the interaction between two fluorescent platinum(II) complexes and a BCL-2 RNA G-quadruplex"
    
75. "Understanding the crowd: how specific is the influence of crowding particles on the activity of RNAs?" Richard Börner (Poster), Erica Fiorini, Birgit Köhn, Michael Kovermann and Roland K.O. Sigel, Abstracts of the Fall Meeting of the Swiss Chemical Society (SCS), Bern, Switzerland, Aug. 21-22, 2017. Published in Chimia, To be announced/2017.
    
76. "Fluorophore guided RNA modeling"
   Fabio Steffen (Talk), Roland K.O. Sigel and Richard Börner, Abstracts of the Fall Meeting of the Swiss Chemical Society (SCS), Bern, Switzerland, Aug. 21-22, 2017. Published in Chimia, To be announced/2017.
    
77. "Photophysical insight on the interaction between an RNA G-quadruplex and fluorescent platinum(II) complexes"
    
78. "A photophysical study on the interaction between fluorescent platinum(II) complexes and RNA G-quadruplexes"
    
79. "A refined dye description for FRET-restrained RNA modeling"
    
80. "Disentangle the interplay of group II intron ribozyme folding and splicing by vesicle encapsulation"
    
81. "Site-specific two-color labeling of long RNAs for single-molecule FRET"