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# POMÈS LAB

Computational Biophysics: Biomacromolecular Structure, Function, and Dynamics



## Stéphanie Baud

Previously a postdoc in the Pomès lab, Stéphanie is now a Maitre de Conference working at the Université de Reims-Champagne-Ardenne in France where she continues to work on elastin peptides, their interaction with the extracellular matrix and also the aging process of elastin.

Contact info:

Laboratoire de Biochimie, CNRS UMR 6198, IFR 53  
Biomolécules, Université de Reims-Champagne-Ardenne

This CV was last updated in the summer of 2007. Please contact Stéphanie directly to obtain the most current information.

### **EDUCATION:**

- 2005-present : Research Fellow
- 2001-2004: Ph.D. student, University of Franche-Comté, Besançon, France. PhD thesis defended on October 22nd. Title : Growth of metallic nanowires assisted with a tip. Study of their physical properties.
- 2000-2001: DEA (Master's degree) in Chemical-Physics of interfaces, with honors, Besançon, France. Rank: 2nd over 20 students
- 1999-2000: Maîtrise (1st year of Master's) of Physics, with honors, Besançon, France. Rank: 1st over 14 students
- 1998-1999: Licence (Bachelor's degree) of Physical -Chemistry, with honors, Besançon, France. Rank: 5th over 54 students
- 1996-1998: DEUG (Associate's degree) of Physical-Chemistry, with honors, Besançon, France.
- 1995-1996: Baccalaureate (high school diploma) of Science with honors, Mont-Roland High School, Dole, France

[link to PhD memo in \\*pdf format](#)

### **WORK EXPERIENCE:**

- 2002-2004: Teaching Assistant in Mechanics, Thermodynamics, Electricity and Optics, first year student majoring in Physical-Chemistry and Mathematics. Explained lessons, gave them exercises and corrected homework.
- 2001: Taught at Victor Hugo High School, Besançon, France. Gave oral test in Physics.
- May 2001: Prepared the laboratory experiments of Physics, Mont- Roland High School, Dole, France.
- May 2000: Prepared the laboratory experiments of Physics, Mont- Roland High School, Dole, France.

#### **PUBLICATION:**

- S. Baud, X. Bouju, C. Ramseyer and H. Tang, Surf. Sci. 523, 267 (2002). 'Atomic diffusion inside a STM junction: simulations by kinetic Monte Carlo coupled to tunneling current calculations.'

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- S. Baud, F. Picaud and C. Ramseyer, Surf. Sci. 532-535, 531 (2003). 'Improvement of nanowire distributions with a STM tip: a kinetic Monte Carlo approach'

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- C. Busse, S. Baud, G. Bihlmayer, C. Polop, T. Michely and S. Blügel, Phys. Rev. B 68, 201401(R) (2003). 'Tunneling voltage dependent height of faulted and unfaulted Ir islands on Ir(111)'

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- S. Baud, C. Ramseyer, G. Bihlmayer, S. Blügel, C. Barreateau, M. C. Desjonquères, D. Spanjaard and N. Bernstein, Phys. Rev. B 70, 235423 (2004). 'Comparative study of ab initio and tight-binding electronic-structure calculations applied to platinum surfaces.'

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- S. Baud, F. Picaud and C. Ramseyer, Progress in Surface Science Research, editor: Charles P. Norris, pp. 57-73 (2005). 'Self organized growth at step edges assisted with a tip: a kinetic Monte Carlo approach'
- S. Baud, C. Ramseyer, G. Bihlmayer, S. Blügel, Phys. Rev. B 73, 104427(2006) 'Relaxations effects on the magnetism of decorated step-edges: Co/Pt(664)'

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- S. Baud, G. Bihlmayer, S. Blügel and C. Ramseyer, Surf. Sci. 600, 4301 (2006) 'First principles investigations of Co wires at Pt(111) step-edges'

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- S. Rauscher, S. Baud, M. Miao, F. W. Keeley and R. Pomès, Structure 14, 1667-1676 (2006) 'Proline and Glycine control protein self-organization into elastomeric or amyloid fibrils'

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#### **CONFERENCES AND SEMINARS:**

- October 2000: Invited talk in Jülich, IFF. 'Influence of defects on the growth of adsorbates'.
- March 2002: Forum des microscopies à sonde locale (Spa, Belgium). Oral presentation: 'Growth in the presence of a STM tip: application to the measure of the diffusion coefficient of Xe/Cu(110)'.
- June 2002: NANO-ECOSS conference (Malmö, Sweden) Oral presentation: 'Improvement of nanowires distributions with a STM tip: a Kinetic Monte Carlo approach'.

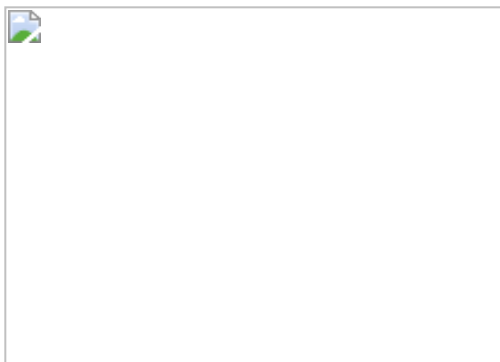
- August 2002: Days of condensed matter (JMC8 in Marseille). Oral presentation: 'Influence of a STM tip on the growth of adsorbates: Application to the measure of the diffusion coefficient of the Xe on copper.' Poster: 'Improvement of nanowires distribution with a STM tip.'
- August 2002: Invited talk in Jülich, IFF. 'Improvement of nanowires distributions with a STM tip: a Kinetic Monte Carlo approach'.
- March 2003: Spring Meeting of German Physical Society (Dresden, Germany). Oral presentation: 'Electronic structure of stacking-fault islands on Ir(111)'
- 2004: Invited talk at the Faculté des Sciences et Techniques de Saint-Jérôme (Marseille, France) 'Les méthodes Monte-Carlo cinétique appliquées à la croissance de nanostructures atomiques et moléculaires'
- August 2005: Gordon Research conference on elastin and elastic fibers (Waterville valley, United States). Poster: 'Structure and dynamics of elastin-like peptides'.
- September 2005: Invited talk in the laboratory of Biochemistry (Reims, France). 'A molecular dynamics simulation study of elastin-like peptides.'
- April 2006: Chemical Biophysics Symposium (Toronto, Canada) Poster: 'A molecular dynamics simulation study of elastin-like peptides.'
- October 2006: Invited talk at the Laboratory of physics (Dijon, France). 'Proline and Glycine control protein self-organization into elastomeric or amyloid fibrils'
- February 2007: Invited talk at the laboratory of Biochemistry (Reims, France) ' Proline and Glycine control protein self-organization into elastomeric or amyloid fibrils'
- February 2007: Invited talk at the laboratory of physics and electronic spectroscopy (Mulhouse, France) 'Growth of metallic nanowires assisted with a tip. Study of their physical properties'

#### **COLLABORATIONS AND INTERNATIONAL TRAINING:**

- 2001: Training period of 3 months at the IFF in Jülich with Professor Stefan Blügel.
- 2002: Training period of 3 months at the IFF in Jülich with Professor Stefan Blügel.
- 2004: Two training period of one months at the IFF in Jülich with Professor Stefan Blügel.

#### **Collaborations:**

Stefan Blügel (IFF, Jülich, Germany)  
 Daniel Spanjaard (Université Paris Sud, France)  
 Cyrille Barreteau (CEA, Saclay, France)  
 Marie-Catherine Desjonquères (CEA, Saclay, France)  
 Carsten Busse (RWTH Aachen, Germany, France)  
 Peter Zeppenfeld (Université de Linz, Austria)  
 Fred W. Keeley (Hospital for Sick Children, Toronto, Canada)



## **Group - Alumni**

- [Aditi Ramesh](#) - MSc

- [Adrian Levine](#) - Researcher
- [Ana Nikolic](#) - Researcher
- [Ching-Hsing Yu](#) - Researcher
- [Chris Madill](#) - PhD
- [Chris Neale](#) - PhD
- [David Caplan](#) - MSc
- [Elisa Fadda](#) - Postdoctoral Fellow
- [Ellen Li](#) - Researcher
- [Grace Li](#) - Ph.D.
- [Howard Wu](#) - Researcher
- [John Holyoake](#) - Postdoctoral Fellow
- [Kethika Kulleperuma](#) - PhD
- [Loan Huynh](#) - Postdoctoral Fellow
- [Marty Kurylowicz](#) - PhD
- [Nick Wang](#) - Researcher
- [Nilu Chakrabarti](#) - Postdoctoral Fellow
- [Nisha Patel](#) - Researcher
- [Rachel Ko](#) - Researcher
- [Rowan Henry](#) - MSc
- [Sarah Rauscher](#) - PhD
- [Stéphanie Baud](#) - Postdoctoral Fellow
- [Tom Roderger](#) - PhD
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## Contact

### [Régis Pomès](#)

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## Funding

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