



must

Molecular Ultrafast
Science and Technology

National Center of Competence in Research



NCCR MUST Women Scientist Workshop

Annual Meeting, Grindelwald, January 22, 2018

Prof. Natalie Banerji, University of Bern



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FNSNF

SWISS NATIONAL SCIENCE FOUNDATION



1999

Int. Baccalaureate (EcolInt, Geneva)

1981

Birth in Geneva





1999-2004

Studies in Chemistry, UniGe

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Int. Baccalaureate (EcolInt, Geneva)



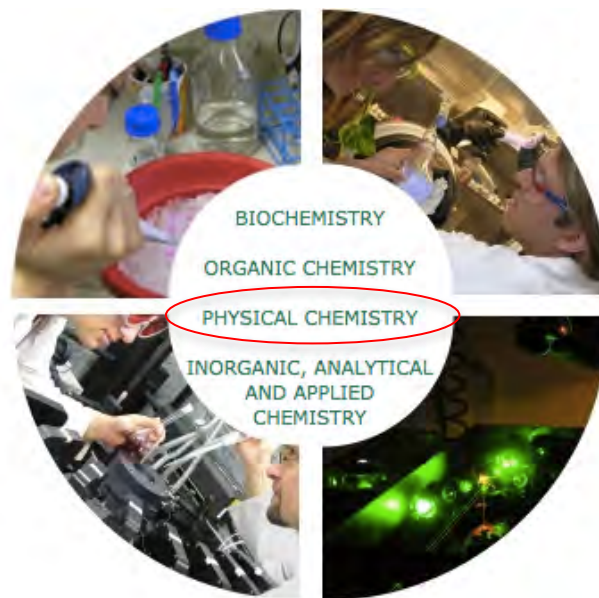
1981

Birth in Geneva



And now ???

- Work or PhD ?
- Switzerland or abroad ?
- Which part of Chemistry do I like?





2005-2009

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Thesis Director

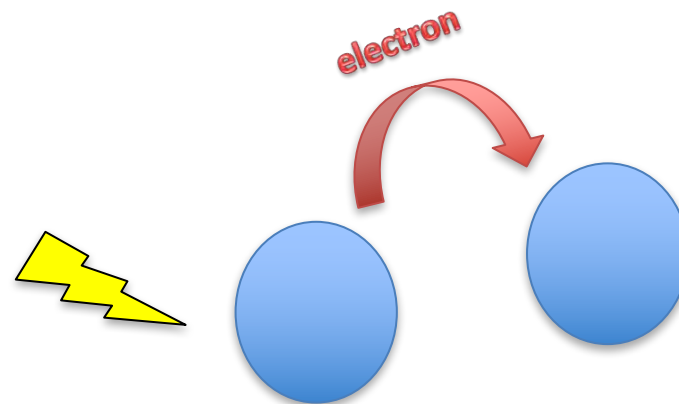


Eric Vauthey

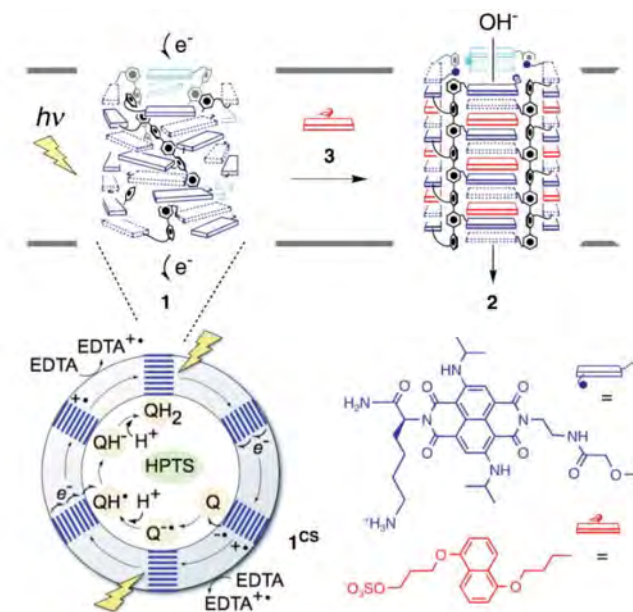


Stefan Matile

Subject



Photoinduced electron transfer



Thesis Challenges

- Science was very successful
- Relationship with group and supervisor
- Learning to rely on my own initiatives
- Knowing what I want

A break (?) in high school teaching



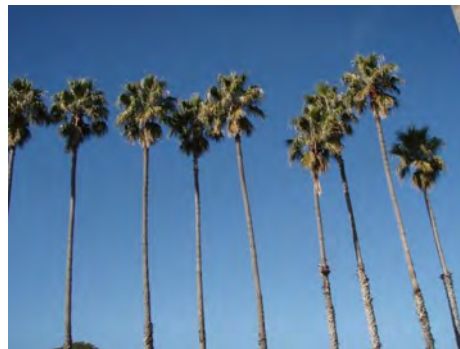
PhD defense



- **Encounter with Jacques Moser**

2009-2011

Postdoc in California



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The postdoc



- or International MBA?



*“Widely known for his pioneering research in and the co-founding of the field of semiconducting and metallic polymers, Professor Heeger is also the recipient of numerous awards, including the **Nobel Prize in Chemistry (2000)**, the Oliver E. Buckley Prize for Condensed Matter Physics, the Balzan Prize for the Science of New Materials, the President.s Medal for Distinguished Achievement from the University of Pennsylvania, the Chancellor.s Medal from the University of California, Santa Barbara, and honorary doctorates from universities in the United States, Europe and Asia. He is a member of the National Academy of Science (USA), the National Academy of Engineering (USA), the Korean Academy of Science and the Chinese Academy of Science.*

*Prof. Heeger has more than 800 publications in scientific journals and more than 50 patents. **He founded UNIAX Corporation in 1990; UNIAX was acquired by DuPont in 2000.** Prof. Heeger is a co-founder and serves on the Board of Directors Konarka Technologies Inc. He is co-founder and Chairman of CBrite Inc. in Santa Barbara. He is co-founder and Vice-Chairman of Cynvenio (micro fluidics for cell sorting and related areas) and Cytomx Therapeutics (novel technology for targeted drug delivery).”*

Alan J. Heeger

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The postdoc was a scientific success

- **Applications of my expertise**
- **Another approach to science**
- **Forming a network (could have done more)**
- **6 Publications (could have done more)**
- **A prestigious but « dangerous » point in the CV**

The postdoc was a success in my life



2011-2014

2009-2011

2005-2009

1999-2004

1999

1981



Scientist at EPFL

Personal and professional reasons
Possibilities in Geneva, Canada

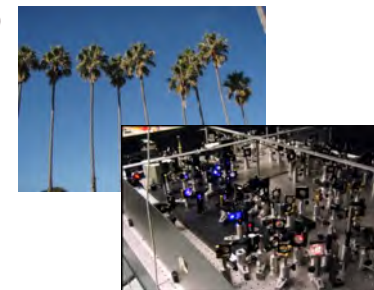
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The Ambizione Program of SNFS

FONDS NATIONAL SUISSE
DE LA RECHERCHE SCIENTIFIQUE

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Home > F > Encouragement > Carrières > Ambizione

Ambizione, Ambizione-PROSPER, Ambizione-SCORE

Avec Ambizione, Ambizione-PROSPER et Ambizione-SCORE (ci-après Ambizione), le Fonds national suisse (FNS) souhaite encourager la relève scientifique dans toutes les disciplines. Cet instrument d'encouragement s'adresse à toutes les chercheuses et à tous les chercheurs désireux de mener, gérer et diriger un projet planifié de façon autonome dans une haute école suisse.

Ambizione concerne des chercheuses et chercheurs qualifiés de Suisse, ayant effectué ou effectuant un séjour à l'étranger, p. ex. dans le cadre d'une bourse de recherche pour chercheuses et chercheurs avancés. Ambizione aimerait aussi inciter de jeunes talents étrangers à effectuer des recherches en Suisse.

La durée maximale du financement du salaire (niveau collaborateur scientifique) et des subsides de projet est de trois ans. Une prolongation de deux ans au maximum est possible dans des cas justifiés. Les subsides de projet peuvent également servir à l'engagement de personnel auxiliaire. Les candidats et candidates suffisamment expérimentés peuvent, dans des cas justifiés et sous certaines conditions, demander l'engagement d'un/e doctorant/e.

L'octroi d'une requête est toujours tributaire de l'approbation de l'institut d'accueil. La condition nécessaire au dépôt d'une requête Ambizione est une confirmation de l'institut d'accueil dans laquelle ce dernier s'engage à accorder un soutien approprié aux frais de recherche (p.ex. matériel, équipement, personnel, déplacements, etc.) à la/au bénéficiaire.

Portrait

- Encouragement
- Projets
- Carrières
 - Chercheurs débutants
 - Chercheurs avancés
 - Marie Heim-Vögtlin
 - Ambizione**
 - Professeurs boursiers FNS
 - EURYI Awards
 - ProDoc
 - Cours en sciences humaines et sociales
 - Cours de formation doctorale
 - PROSPER
 - SCORE
 - Programme MD-PhD
 - International Short Visits
 - Programmes
 - Infrastructures
 - Communication scientifique

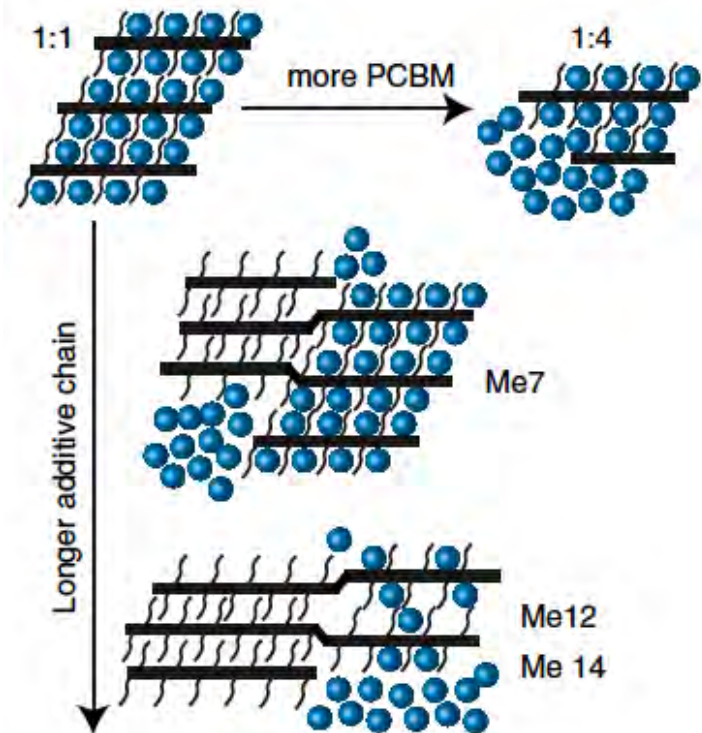
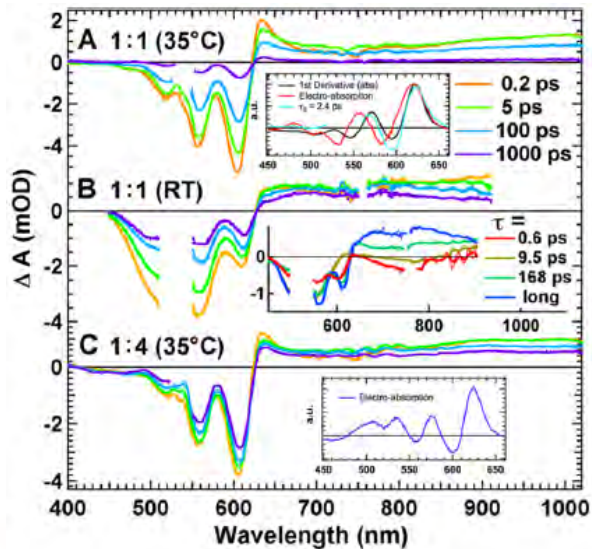
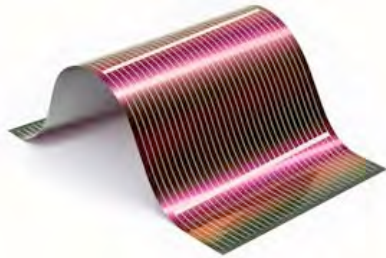


Jacques Moser

- Somewhat criticized program
- Must be used correctly

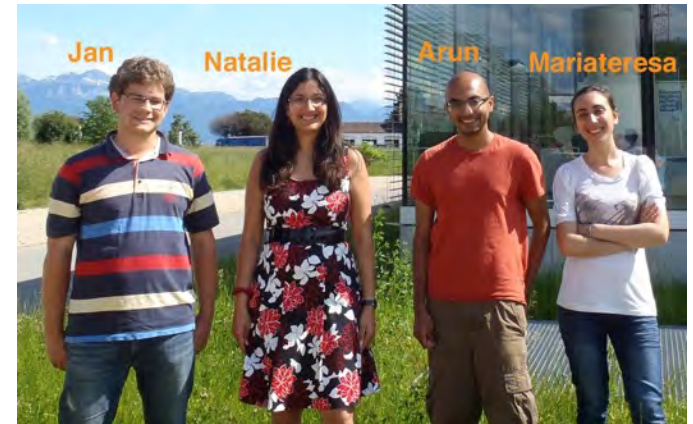
The Ambizone research

- Spectroscopy of organic solar cells

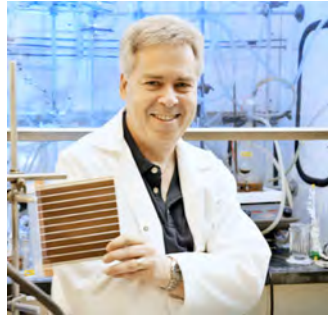


The Ambizione years

- **Very important independence**
- **Neutral attitude of Jacques**
- **Guiding students (PhD, Master)**
- **Experimental work in the lab**
- **Quickly published to improve CV**
- **Travel, conferences → Collaboration network**
- **Quickly applied to positions (Geneva, Canada, Fribourg, Zürich)**



Important collaboration network



- **Scientific exchange**
- **Conference invitations**
- **Citations, review**
- **Based on personal affinity and respect**
- **I'm not crazy about hierarchy**

2014-2017

Associate (and SNF) Prof. in Fribourg
Personal and career outlook reasons

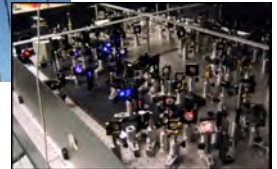
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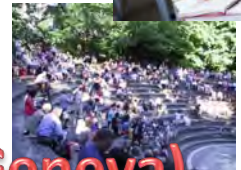
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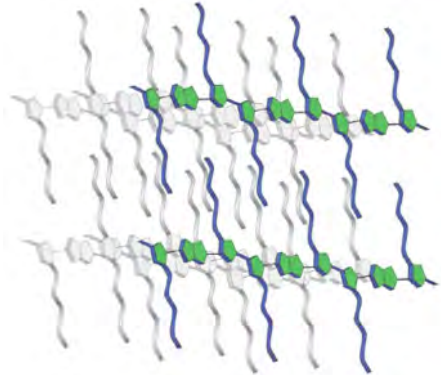
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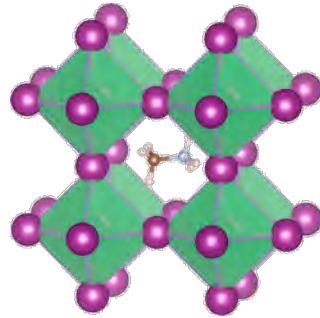


Rapidly expanding group and research

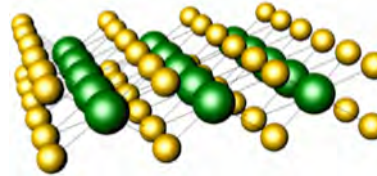
Organic Thin Films



Perovskites



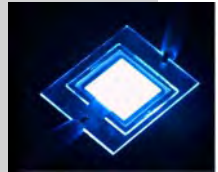
2D Materials



- ✓ solution-processed
- ✓ low-cost
- ✓ energy efficient
- ✓ large-area
- ✓ lightweight
- ✓ flexible

APPLICATIONS

- Photovoltaics
- Transistors
- LEDs
- Lasers
- Sensors
- Bioelectronics



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Very overwhelming experience

- **Setting up lab and group, leading the research**
- **Obtaining an ERC grant**
- **Preparing many new classes (teaching)**
- **Travelling to conferences**
- **Way too much administration (said yes to everything ended up Head of Department)**
- **Stopped enjoying and decided on fundamental change**

2017

Full Prof. in Bern

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b
UNIVERSITÄT
BERN

UNI
FR

UNIVERSITÉ DE FRIBOURG
UNIVERSITÄT FREIBURG

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