

BY-NANOERA FP7 Trainings

Training Course 3: Developing a FP7 proposal

Based on the requirements of the International Research
Staff Exchange Scheme Call for proposals 2013

Part3

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БелИКА



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Do's & Don'ts: Overview

□ A lively text...

- Good catch phrase
- Main message
- The structure of a sentence

□ ...well presented...

- Citation
- Examples
- Layout





Do's & Don'ts: Good catch phrase (I)

- A good catch phrase** is the entrance door to your text.
- It's **simple, short and induces the reader to continue** reading.
- Try a **citation, a statement, an example.**
- Do not start with numbers!**





Do's & Don'ts: Good catch phrase (II)

Good example:

„Climate change is one of the most pressing problems of our time and is on the agenda of politicians and scientists alike“.

Bad example:

“This project may give the opportunity to combine high technology of CT and MRI with an adequate level of interventistic radiology within the field of veterinary neurology“.





Do's & Don'ts: The structure of a sentence (I)

- A well structured sentence is **short**.
- It is **complete**.
- It uses **verbs rather than nouns**.
- It is in **plain English** language instead of complicated foreign and technical terms.
- It is **factual**.





Do's & Don'ts:

The structure of a sentence (II)

Good example:

„Universities restructure their studies. This process is called the Bologna process. It has the goal to standardize the studies all over Europe.“

Bad example:

„Universities nowadays are obliged to perform a restructuration corresponding to the complicated process known as Bologna-Process which has the goal to create a european-wide standardization of the standards of studies.“





Do's & Don'ts: A lively text (I)

Main message

- Should be placed at the very, very beginning
- The more important the message, the more to the top of the text it should be, in decreasing order of importance
- Should be easy to understand
- Ask yourself / the author: Explain me in one short sentence what the goal of your research is. Phrase it as simply as possible





Do's & Don'ts: A lively text (II)

Good example:

„The main aim of the proposed research is to reconstruct winter-spring temperatures from lakes in the Swiss Alps and the northern Swedish alpine region.“

Bad example:

„The goal of the project is the development of a novel stereotactic device allowing both CT- and MRI-guided biopsy for diagnosis of neoplastic and non-neoplastic brain lesions in dogs and cats.“





Do's & Don'ts: Quotation (I)

- ❑ Scientific writing means: Every bit of information from another source has to be proved.
- ❑ The Proof is the quotation.
- ❑ Different standards (Miller, 2007, p.73) exist in the different languages.
- ❑ Authors have to prove their quotation, but use them only when it makes sense and if, they have to be correct and complete.
- ❑ Do not create a text with one quotation after the next, write your own text.



Do's & Don'ts: Quotation (II)

Good example:

„Studies on alpine limnology are increasingly important in the context of present climate change, because of the sensitivity shown by mountain ecosystems to atmospheric forcing (Battarbee et al., 2002; Pla and Catalan, 2005).“

Bad example:

„In the European literature only one author (Moissonnier) stand out in this field.“





Do's & Don'ts: Examples & Graphics

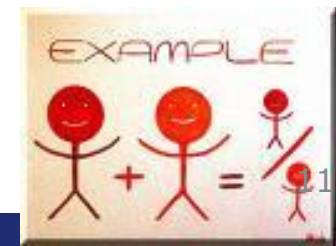
- ❑ To illustrate an abstract content, add examples!
- ❑ Examples should be easy to understand (from everyday life)

Good example:

„Here, future changes in winter temperature and precipitation are likely to have a profound effect on water and energy supplies and winter tourism: The Swiss Alps without snow in winter would be an ecological and economical desert.”

Bad example:

”However, it is mostly the extreme climatic events which have greater environmental, socio-economic and health impacts. In addition, regional- and local-scale temperature variability is expected to have much bigger amplitudes than hemispheric or global means.”





Do's & Don'ts: Layout (I)

- The layout is the arrangement of the text on the page.
- Highlight in bold **catch phrases** and **key words**.
- Summarize content with **bullet point lists**.
- Leave a **space between paragraphs**.
- Use **graphics and pictures**. Graphics and figures can tell a lot more than simple text.
- When viewing a page, everyone always first looks at the **picture**.
- Make sure to give the graphic/picture a heading and **explain** it in the text. The picture should be large enough and also explain itself in **black and white**.
- Pictures / graphs should be **functional**, not merely decorative
- Use headings where appropriate.





Do's & Don'ts: Layout (II)

Good example

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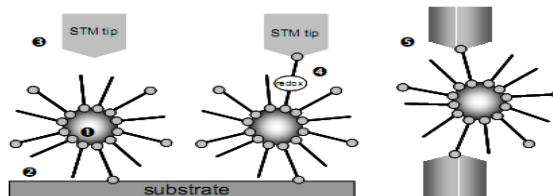
The Marie Curie Actions

FP7-PEOPLE-2007-2-1-IEF

Research methodology

In order to reach the overarching project objective, an ambitious interdisciplinary approach of state-of-the-art experimental and theoretical efforts is required. The comprehensive understanding and integration of nanocrystal-mediated electron tunnelling will represent a significant advance in the fast-developing field of molecular electronics.

A clear **sequence of steps**, each novel, challenging and essential to the overarching objective, can be identified; numbers ❶ to ❸ refer to the accompanying scheme.



❶ **To synthesise nanocrystals that display active molecular electronic function.** Only in the past few years, nanocrystals with variable size, ligand shell and sufficient monodispersity to allow systematic study have become synthetically accessible. For our project, nanocrystals in the quantum-confinement size range, of various base metals and with variable ligand shells and anchoring groups will be synthesised. Metal cores will initially consist of gold for reasons of chemical stability. At a later stage, this will be extended to Ag and Pd to study the effect of metallic electronic structure on the STS behaviour of the nanoassembly. To cover the accessible cluster size range where quantum confinement effects can be expected, particle diameters will extend from 0.8 to >2 nm (targets: Au₁₁, Au₂₅, Au₇₅, Au₁₄₅, Au₂₂₅). Hybrid systems consisting of a cluster and a redoxactive ligand (*i.e.*, thiolated viologen and ferrocene), to be studied in phase ❷, will be synthesised relying on place-exchange reactions. Samples of suitable starting systems are already available, and consist of nanoparticles with a highly monodisperse Au₁₄₅ core and a ligand shell of either *n*-hexanethiolate (C6S) or a mixed monolayer *n*-hexanethiolate/4-mercaptopyridine (4MP). The latter system was used in the proof-of-principle experiment in Lyngby³ and will allow reproducibility tests in the Bern lab. We believe the applicant's previous experience in one of the world's pioneering labs in this field (Prof. David Schiffrin, Liverpool/UK) warrants the ideal background.

❷ **To refine techniques for nanocrystal immobilisation on ultraclean substrates.** Addressing single-nanocrystal electronic function requires near-perfect control over spatial and structural organisation. Single-crystal noble metal surfaces such as Au(111) and Pt(111) are atomically planar and characterised to atomic resolution, and will be the substrates of choice. The host group has extensive expertise in this field. A particular advantage of Au and Pt as substrates is that (nearly) symmetric tunnel junctions can be created through the use of an STM tip of the same material. Limitation of the number density of molecules on the surface is likely necessary and could involve matrix isolation/dilution or be based on intermolecular interactions (*e.g.*, electrostatic repulsion between anion-terminated nanocrystal ligand shells). The collective electrochemical behaviour (in



Do's & Don'ts: Layout (III)

Bad example

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Frage hier eingeben

Datei Bearbeiten Ansicht Einfügen Format Extras Tabelle Fenster ?

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device allowing both CT- and MRI-guided biopsy for diagnosis of neoplastic and non-neoplastic brain lesions in dogs and cats. The novel device should allow to combine the better contrast resolution from MRI with the superior spatial accuracy of CT and be adapted for small pet (dogs and cats in particular). Introducing stereotaxis in the diagnostic approach to brain lesions should lead to an improvement in neurologic patient management, in terms of specificity of treatment, quality of life, prognosis. Dogs and cats are holding an increasing importance in wellness of humans in Europe; this is especially true for specific groups of people, i.e. those which live alone, the elderly, sick and disabled persons (Graf S., 1999; Castelli P., 2001; Allen K, 2002; Dunn KL, 2005; Wells DL, 2007). Pets may have, besides an intrinsic value, also a sentimental meaning for their owners. Taking care of them as carefully as possible must be a goal for veterinary schools. Since brain lesions are quite common in pets (Cherubini 2005), advanced diagnostic techniques and specific treatments are requested. Major progress was made recently in the imaging and diagnostic techniques in human neuropathies, but since 2002 in Europe no further developments were performed in this field of veterinary medicine. Based on experience in human medicine, potential materials can be produced economically. The new device would allow to reduce the number of pet euthanasia, as insecure diagnosis and prognosis currently lead the owners rather to opt for euthanasia than for treatment. Correct diagnosis and correlated appropriate therapy lead to a decreasing in euthanasia also in other veterinarian fields (Jensen DJ, 1992). The project would allow to ideally expand my technical skills on MRI and CT diagnostic field, to combine these with neurological and neurosurgical rudiments, to profit from the collaboration with radiologists certified by the European College of Veterinary Radiology and from the experience that a certified small animal teaching hospital can offer. From the background it is possible to notice that at the moment a standardized veterinary stereotactic technique doesn't still exist. In the European literature only one author (Moissonnier) stand out in this field. He published reports from 1998 to 2002 concerning a CT-guided stereotactic procedures, none from 2002 up to now. One reason could be the particular procedure the author carries out, leading to an excessive morbidity rate. In a world-wide view, LeCouteur gives an important contribute in this field. Since 1999, the author performs CT-guided stereotactic brain biopsies in the School of Veterinary Medicine of California University. The experience of the author leads to recent communications and papers (LeCouteur, September 2002 and February 2006). Nevertheless, there is not a common, safe, unified background from which learning basic knowledge to perform

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Further do's and don'ts (I)

- ❑ No „copy-paste“ generic affirmations but rooted in the specifics of your project

Biopolitics is a wonderful thing, and to humankind many joys will bring.

Astrophysics is a wonderful thing, and to humankind many joys will bring.

Seismic engineering is a wonderful thing, and to humankind many joys will bring.

Picking one's nose is a wonderful thing, and to humankind many joys will bring 😊

Example inspired by Multatuli





Further Do's and Don'ts (II)

- ❑ Don't „say“ that you/your idea are good. Prove it!

Give examples

Use statistics

Quantify

Specify

Don't preach, convince with arguments

- ❑ Explain “acr. and abbr.”





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Community research

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THANK YOU FOR ATTENTION



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