

Abstract Cover letter

Igor Pašti

Istraživanje

- Identifikacija tematike/Pretraga literature
- Postavka eksperimenta
- Izrada eksperimenta
- Analiza i diskusija rezultata
- Priprema publikacije
- Proces publikovanja



Identifikacija teme – predmeta istraživanja

Zašto?

Da li postoji veza između broja pomorandži u prodavnici sa ukupnim brojem proizvoda bez glutena?



VS.



Istraživanje

- Identifikacija tematike/Pretraga literature
- **Postavka eksperimenta**
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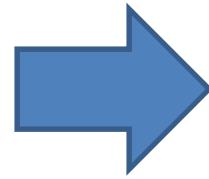
Postavka eksperimenta

- Analiza broja prodavnica
- Prebrojavanje proizvoda
- Prikupljanje podataka
- Izbor statističke metode
- ...

Istraživanje

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Izrada eksperimenta

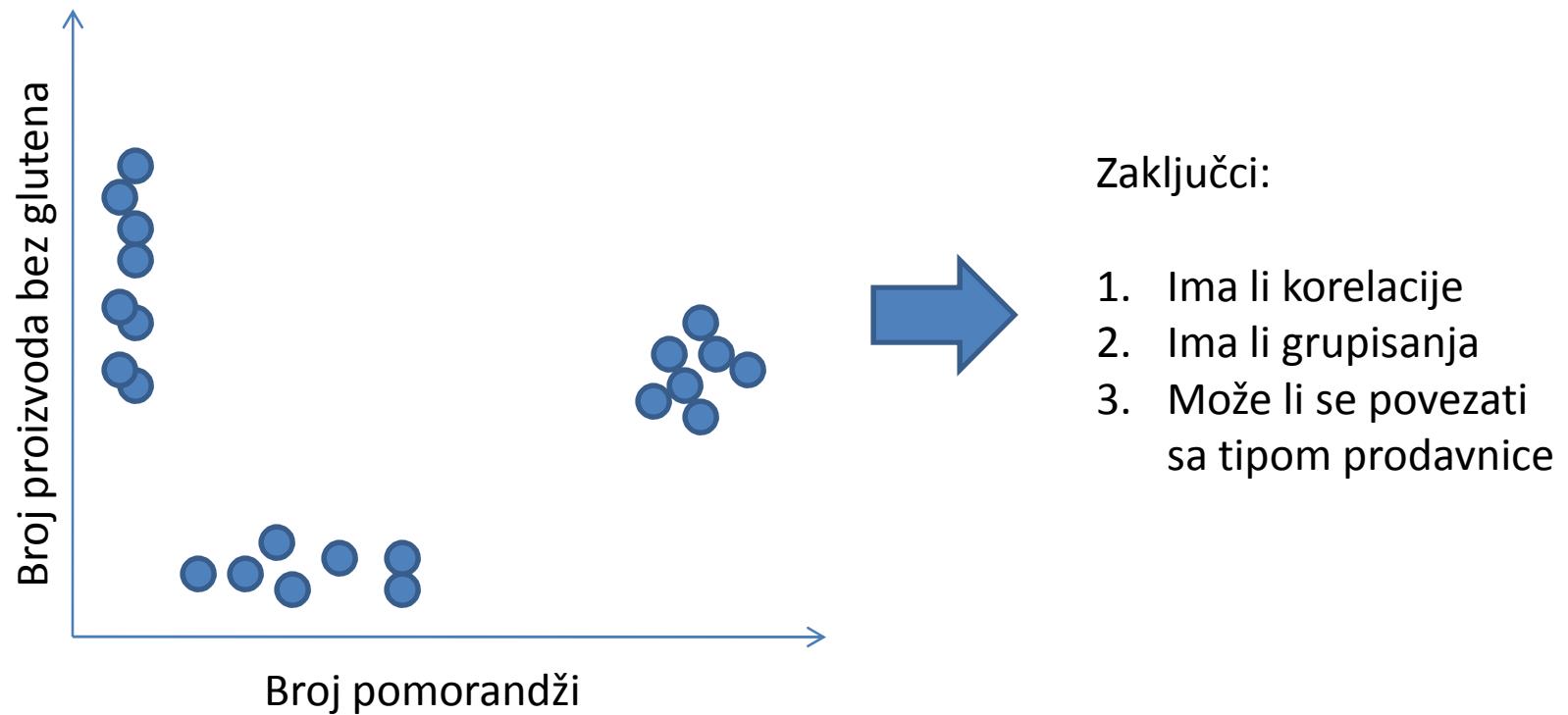


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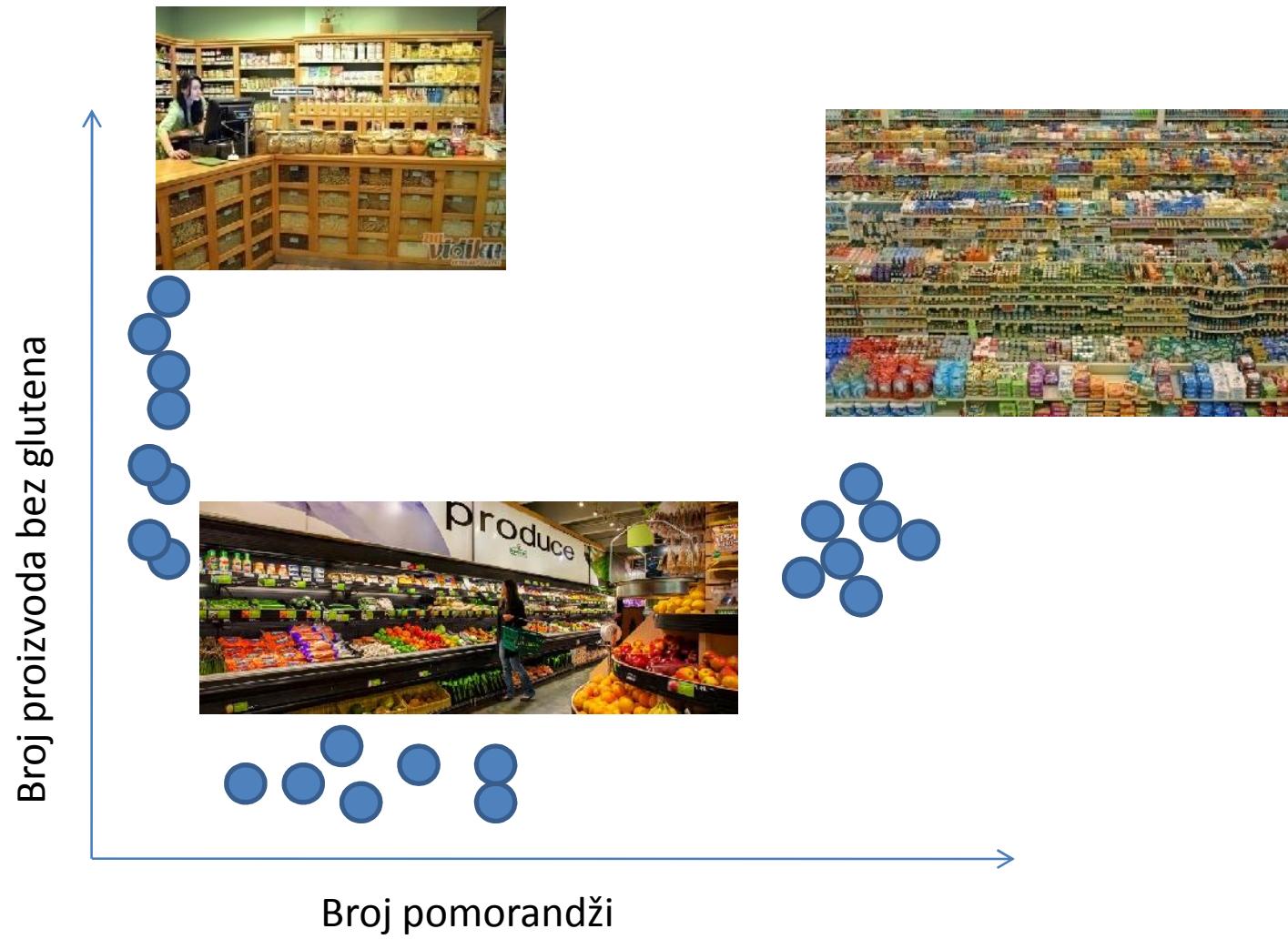
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Analiza i diskusija rezultata



Analiza i diskusija rezultata



Glavni zaključci su...



Istraživanje

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- **Priprema publikacije**
- Proces publikovanja

Priprema publikacije

- Odabir časopisa (kriterijumi)
- Priprema manuscripta
- Korekcije, korekcije, korekcije
- Još korekcija...
- Slanje manuscripta
- Proces recenzije / revizije
- Čestitamo, objavili ste rad

WRITING SCIENTIFIC PAPERS/research articles



Struktura članka

- Uvod  • Identifikacija tematike/Pretraga literature
- Materijal / metode / experimental  • Postavka eksperimenta
- Rezultati  • Izrada eksperimenta
- Diskusija  • Analiza i diskusija rezultata
- Zaključak
- Literatura

Struktura članka

ABSTRAKT

- Uvod
- Materijal / metode / experimental
- Rezultati
- Diskusija
- Zaključak
- Literatura

Abstrakt

- An abstract is a brief summary of a research article, thesis, review, conference proceeding, or any in-depth analysis of a particular subject and is often used to help the reader quickly ascertain the paper's purpose.
- Gary Blake and Robert W. Bly, *The Elements of Technical Writing*, pg. 117. New York: Macmillan Publishers, 1993. ISBN 0020130856

Indian J Psychiatry. 2011 Apr-Jun; 53(2): 172–175.
doi: [10.4103/0019-5545.82558](https://doi.org/10.4103/0019-5545.82558)

PMCID: PMC3136027
PMID: [21772657](https://pubmed.ncbi.nlm.nih.gov/21772657/)

How to write a good abstract for a scientific paper or conference presentation

Chittaranjan Andrade

▪ Author information ▪ Copyright and License information [Disclaimer](#)

This article has been [cited by](#) other articles in PMC.

Abstract

Go to:

Abstracts of scientific papers are sometimes poorly written, often lack important information, and occasionally convey a biased picture. This paper provides detailed suggestions, with examples, for writing the background, methods, results, and conclusions sections of a good abstract. The primary target of this paper is the young researcher; however, authors with all levels of experience may find useful ideas in the paper.

Keywords: Abstract, preparing a manuscript, writing skills

INTRODUCTION

Go to:

- “Only a reader with a very specific interest in the subject of the paper, and a need to understand it thoroughly, will read the entire paper.”
- “Thus, for the vast majority of readers, the paper does not exist beyond its abstract.”

Tipovi abstrakta

- Descriptive
- Informative
- Structured
- Semi-structured
- Non structured

Tipovi abstrakta

- **Descriptive**

This type of abstract is usually very short (50–100 words). Most descriptive abstracts have certain key parts in common. They are:

Background

Purpose

Particular interest/focus of paper

Overview of contents (not always included)

Tipovi abstrakta

- **Informative**

From these abstracts, you must get the essence of what your report is about, usually in about 200 words. Most informative abstracts also have key parts in common. Each of these parts might consist of 1–2 sentences. The parts include:

Background

Aim or purpose of research

Method used

Findings/results

Conclusion

Tipovi abstrakta

- Structured

A structured abstract has a *paragraph for each section: Introduction, Materials and Methods, Results, and Conclusion* (it may even include paragraphs for the objectives or other sections).

Tipovi abstrakta

- Semi-structured

A semi-structured abstract *is written in only one paragraph, where each sentence corresponds to a section.* All the sections of the article are present as in the structured abstract

Tipovi abstrakta

- Non structured

When the abstract *does not present divisions between each section*, and it may not even present any of them, it is a non-structured abstract. The sentences are included in a sole paragraph. This type of presentation is *ideal for descriptive abstracts*

Planiranje abstrakta

Introduction—what is the topic?

Statement of purpose?

Summarize why have other studies not tackled similar research questions?

How has the research question been tackled?

How was the research done?

What is the key impact of the research?

Nekoliko primera (ACS author guide)

One or two sentences providing background on the problem.

Two or three sentences summarizing the methodology and results.

A concluding sentence highlighting the significance of the study.

Nitrogen oxides, including nitrogen dioxide and nitric acid, react with mineral dust particles in the atmosphere to yield adsorbed nitrate. Although nitrate ion is a well-known chromophore in natural waters, little is known about the surface photochemistry of nitrate adsorbed on mineral particles. In this study, nitrate adsorbed on aluminum oxide, a model system for mineral dust aerosol, is irradiated with broadband light ($\lambda > 300$ nm) as a function of relative humidity (RH) in the presence of molecular oxygen. Upon irradiation, the nitrate ion readily undergoes photolysis to yield nitrogen-containing gas-phase products including NO_2 , NO , and N_2O , with NO being the major product. The relative ratio and product yields of these gas-phase products change with RH, with N_2O production being highest at the higher relative humidities. Furthermore, an efficient dark reaction readily converts the major NO product into NO_2 during post-irradiation. Photochemical processes on mineral dust aerosol surfaces have the potential to impact the chemical balance of the atmosphere, yet little is known about these processes. In this study, the impact that adsorbed nitrate photochemistry may have on the renoxidation of the atmosphere is discussed. (*J. Phys. Chem. A* 2009, 113, 7818–7825).

Nekoliko primera (ACS author guide)

Polymer-fullerene bilayer heterostructures are suited to study excitonic processes in conjugated polymers. Excitons are efficiently quenched at the polymer-fullerene interface, whereas the polymer-vacuum interface is often considered as an exciton-reflecting interface. Here, we report about efficient exciton quenching close to the polymer-vacuum interface of spin-coated MDMO-PPV (poly[2-methoxy-5-(2'-ethyl-hexyloxy)-*p*-phenylenevinylene]) films. The quenching efficiency is estimated to be as high as that of the polymer-fullerene interface. This efficient quenching is consistent with enhanced intermolecular interactions close to the polymer-vacuum interface due to the formation of a “skin layer” during the spin-coating procedure. In the skin layer, the polymer density is higher; that is, the intermolecular distances are shorter than in the rest of the film. The effect of exciton quenching at the polymer-vacuum interface should be taken into account when the thickness of the polymer film is on the order of the exciton diffusion length; in particular, in the determination of the exciton diffusion length. (*J. Phys. Chem. B* 2009, 113, 9104–9109).

Nekoliko primera (ACS author guide)

Nanostructured metallic architectures have unique and highly attractive properties, including large optical field enhancements resulting in strong light scattering and absorption. Modification of prefabricated nanostructures by simple galvanic displacement (GD) allows for the design of new nanomaterials with enhanced optical properties. In this paper, we have studied the optical properties of two families of Ag fractals before and after GD in a Au(III) solution. The new nanomaterials showed significantly improved optical enhancing properties that allowed for straightforward and highly reproducible single-molecule detection by surface-enhanced resonance Raman scattering (SERRS). (*J. Phys. Chem. C* 2009, **113**, 12897–12900).

Da probamo



VS.



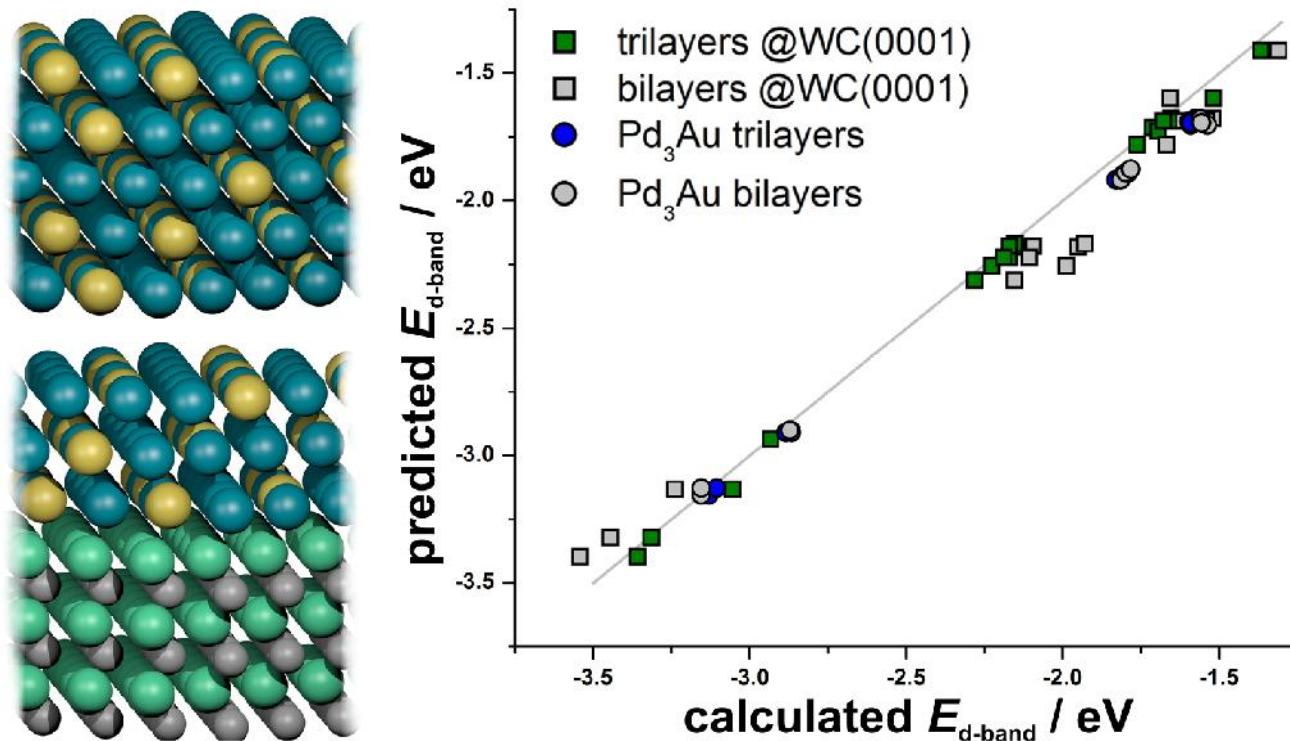
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- Summarize why have other studies not tackled similar research questions?
- How has the research question been tackled?
- How was the research done?
- What is the key impact of the research?

Nemojte da...

- Koristite skraćenice
- Izbegavajte reference
- Koristite jednostavan jezik
- Nemojte da kopirate zaključak



OK, sada malo ozbiljnije



Istraživanje

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Identifikacija teme – predmeta istraživanja

Zašto?

**Može li se na osnovu debljine sloja katalizatora na
nekoj podlozi predvideti njegovo ponašanje?**

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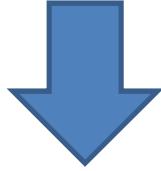
Postavka eksperimenta

- Experiment – teško
- *In silico* experiment
- Postavka modela
- Reprezentacija realnog katalizatora
- Reprezentacija modela
- Izbor računske metode

Istraživanje

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Izrada eksperimenta

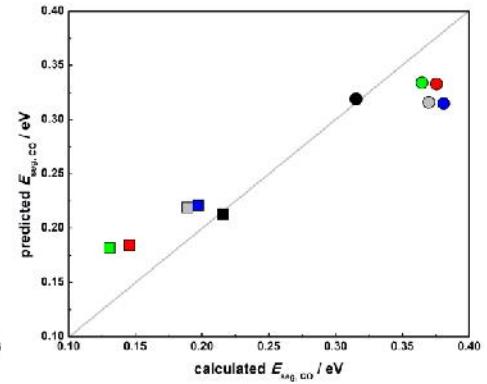
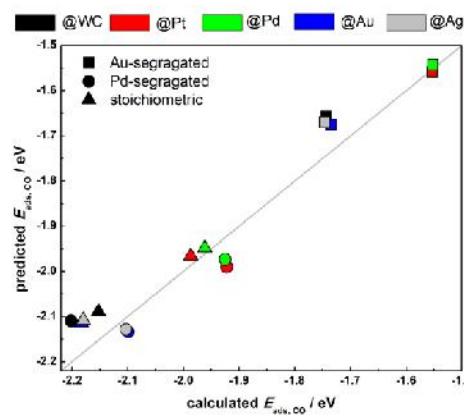
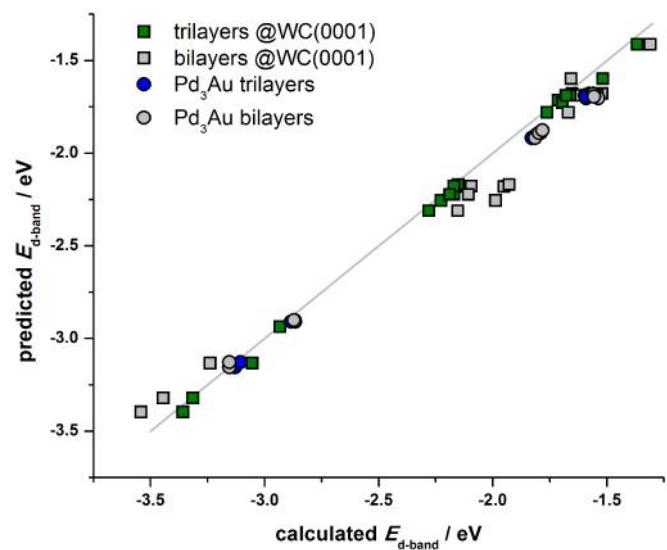
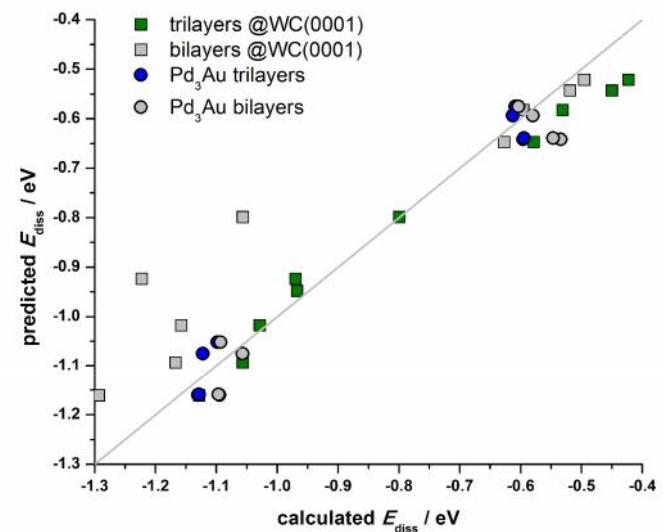
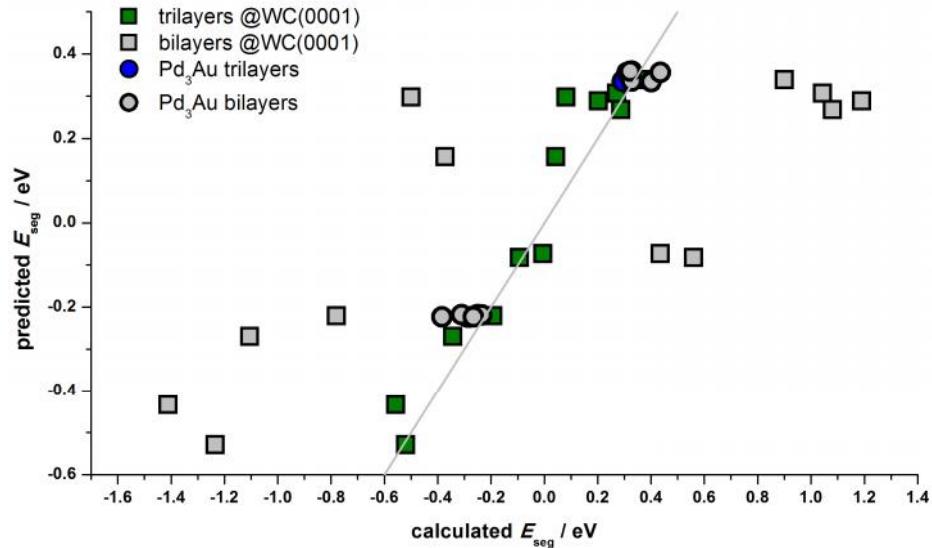


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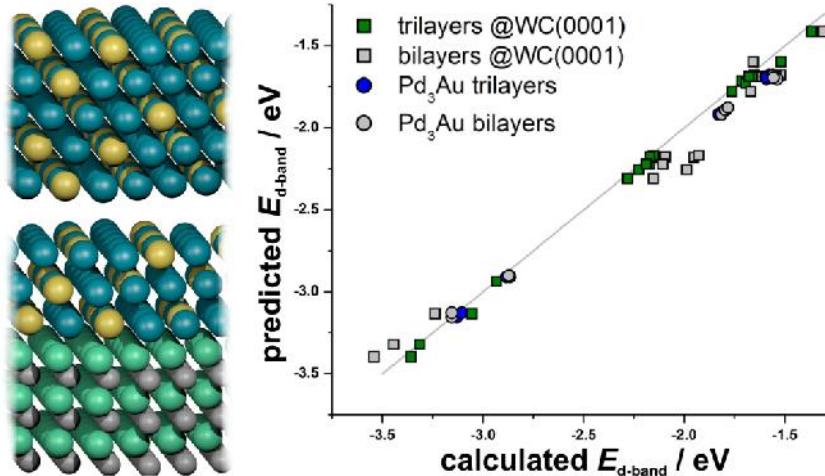
Analiza i diskusija rezultata



Glavni zaključci su...



Da probamo



- Introduction—what is the topic?
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- Summarize why have other studies not tackled similar research questions?
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- What is the key impact of the research?

Lattice mismatch as the descriptor of segregation, stability and reactivity of supported thin catalyst films

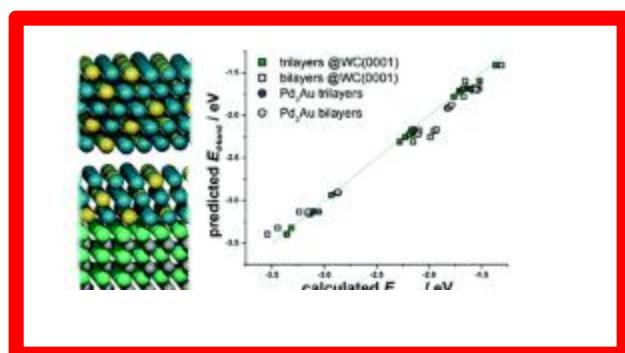
 Check for updates

Edvin Fako,^{a,b} Ana S. Dobrota,^b Igor A. Pasti,^{***c**} Núria López,^b Slavko V. Mentus,^{a,c} and Natalia V. Skorodumova^{a,d}

 Author affiliations

Abstract

The increasing demand and high prices of advanced catalysts motivate a constant search for novel active materials with reduced contents of noble metals. The development of thin films and core–shell catalysts seems to be a promising strategy along this path. Using density functional theory we have analyzed a number of surface properties of supported bimetallic thin films with the composition A_xB (where $A = \text{Pt}$ and Pd , and $B = \text{Cu}$, Ag and Au). We focus on the surface segregation, dissolution stability and surface electronic structure. We also address the chemisorption properties of Pd_3Au thin films supported by different substrates, by probing the surface reactivity with CO. We find a strong influence of the support in the case of mono- and bilayers, while the surface strain seems to be the predominant factor in determining the surface properties of supported trilayers and thicker films. In particular, we show that the studied properties of the supported trilayers can be predicted from the lattice mismatch between the overlayer and the support. Namely, if the strain dependence of the corresponding quantities for pure strained surfaces is known, the properties of strained supported trilayers can be reliably estimated. The obtained results can be used in the design of novel catalysts and predictions of the surface properties of supported ultrathin catalyst layers.



Article HTML

Supplementary files

Supplementary information
PDF (409K)

Publication details

Almetric 2

The article was received on 27 Oct 2017, accepted on 08 Dec 2017 and first published on 08 Dec 2017

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Article type: Paper

DOI: 10.1039/C7CP07276G

Citation: *Phys. Chem. Chem. Phys.* 2018, 20, 1524-1530

BibTeX

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ŠTA JE OVO???????

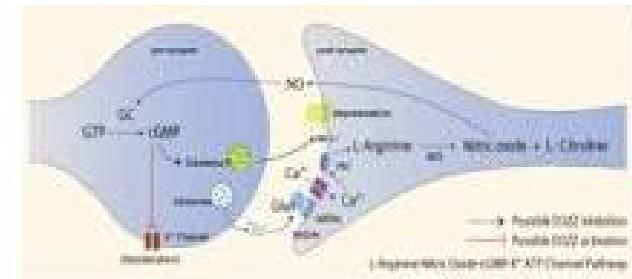
Search articles by author

Graphical abstract / Table of Content entry

A **Graphical Abstract** is a single, concise, pictorial and visual summary of the main findings of the article. This could either be the concluding figure from the article or a figure that is specially designed for the purpose, which captures the content of the article for readers at a single glance.

Graphical abstract - Elsevier

<https://www.elsevier.com/authors/journal-authors/graphical-abstract>



Question Asked 4 years ago



Noble K Kurian

17.26 · Indian Council of Medical Research

How to create a graphical abstract ?

Now most of the journals need graphical abstract for the article to be published. Is there any general guidelines for preparing graphical abstracts ?. Is there any software available design graphical abstracts ?.

All Answers (59)



Linas Balciauskas

Nature Research Centre

4 years ago

First of all - what is the title and text abstract?

3 Recommendations



Linas Balciauskas

Nature Research Centre

4 years ago

Šarolta, it is graphic abstract, not geographic

3 Recommendations



Linas Balciauskas

Nature Research Centre

3 years ago

Idea is most important, not the software

3 Recommendations

Graphical abstract / Table of Content entry

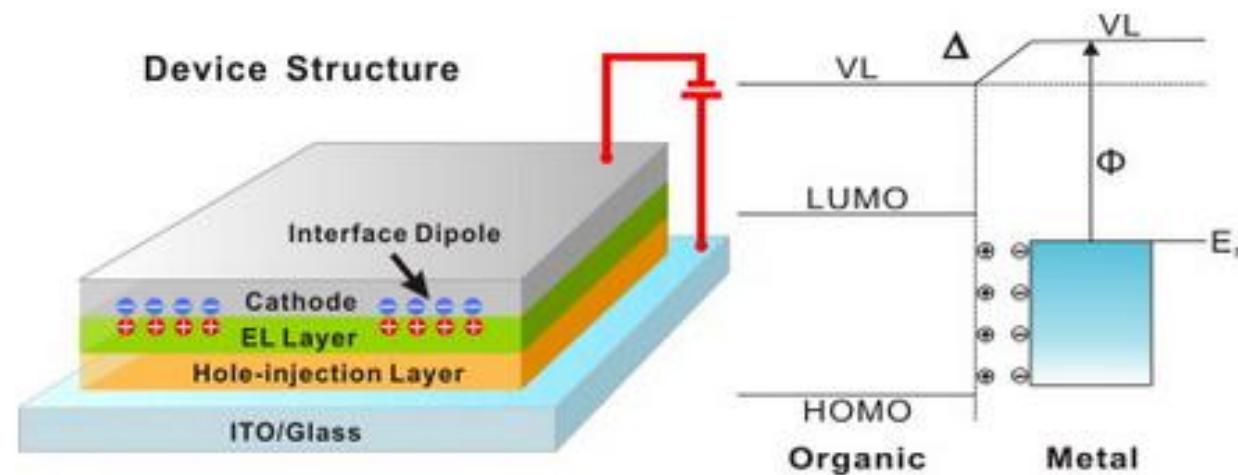
Author instructions

A Graphical Abstract should allow readers to quickly gain an understanding of the main take-home message of the paper and is intended to encourage browsing, promote interdisciplinary scholarship, and help readers identify more quickly which papers are most relevant to their research interests.

Authors must provide an image that clearly represents the work described in the paper. A key figure from the original paper, summarising the content can also be submitted as a graphical abstract.

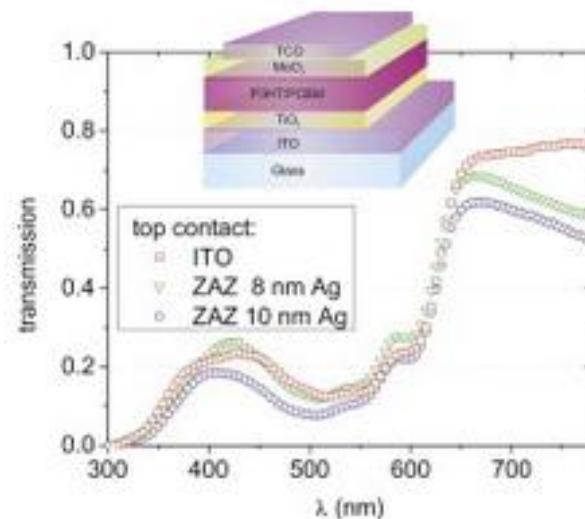
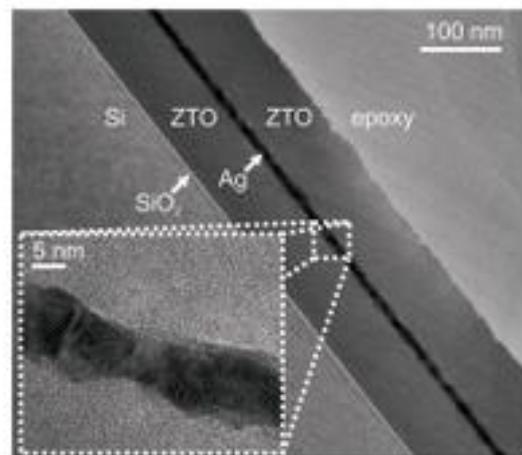
Nekoliko dobrih primera (prema Elsevier-u)

Example 14: Modifying organic/metal interface via solvent treatment to improve electron injection in organic light emitting diodes, Q. Wang, Y. Zhou, Organic Electronics, Volume 12, Issue 11, November 2011, Pages 1858-1863. <http://dx.doi.org/10.1016/j.orgel.2011.07.021>



Nekoliko dobrih primera (prema Elsevier-u)

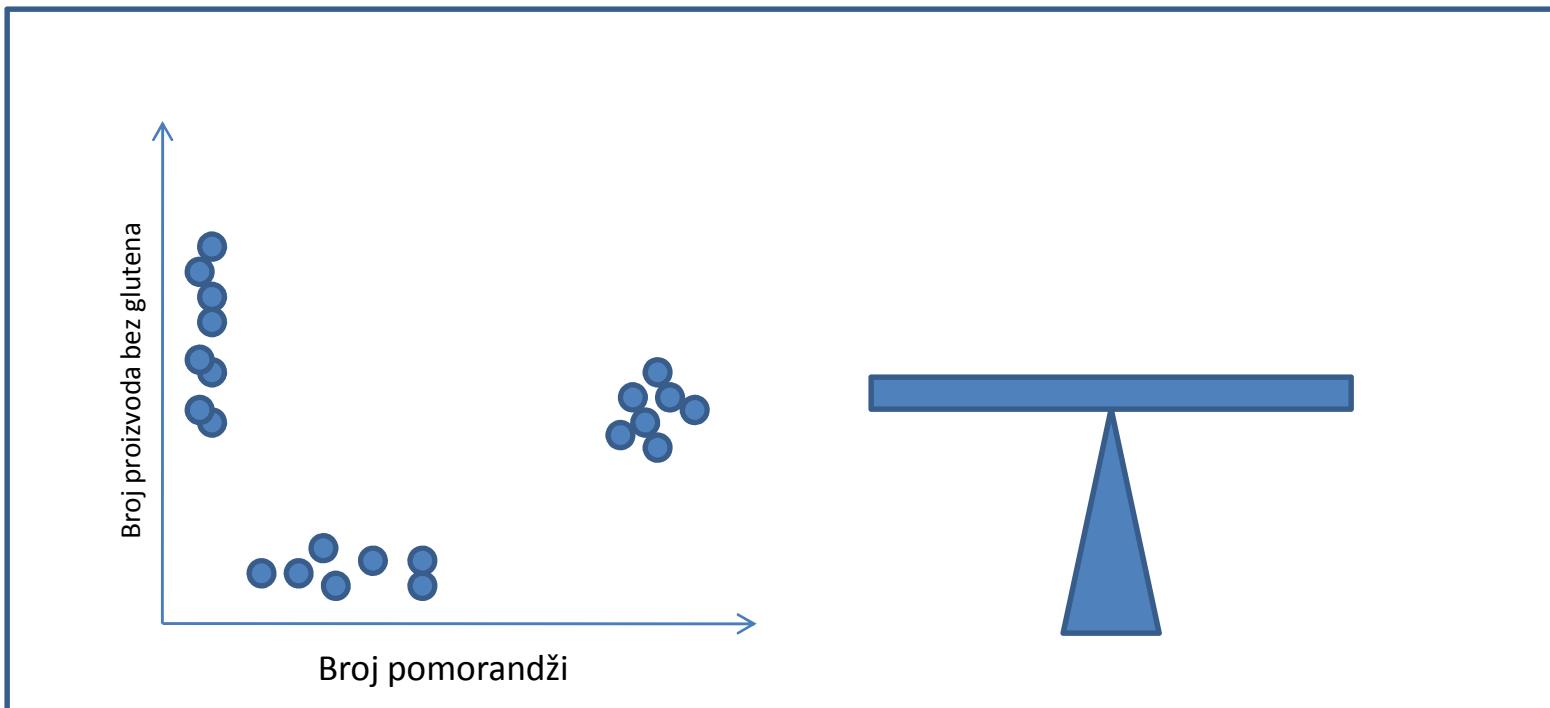
Example 15: Efficient large area semitransparent organic solar cells based on highly transparent and conductive ZTO/Ag/ZTO multilayer top electrodes,
Thomas Winkler, Hans Schmidt, et al., Organic Electronics, Volume 12, Issue 10, October 2011, Pages 1612-1618. <http://dx.doi.org/10.1016/j.orgel.2011.06.015>



Da probamo



vs.



OK, sada malo ozbiljnije

Metodologija/model

rezultat

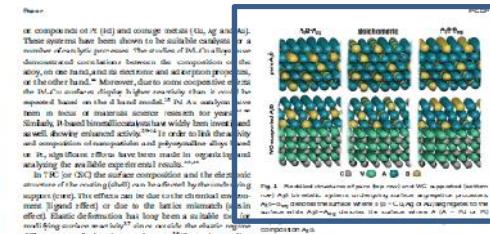


Fig. 1. Predicted structures of pure metal M1 and supported metal M2 layers on MgO-supported alumina substrates (MgO-Al₂O₃). The figure shows the predicted structures of the pure metal M1 layers (top row) and the supported metal M2 layers (bottom row) where 1 = Au (yellow), 2 = MgO (green), and 3 = Al₂O₃ (blue). The latter have been formed in vacuum and without available oxygen source.

In Fig. 1 (M1) the surface composition and the electronic structure of the layers were calculated by applying a spin-polarized approach. This approach allows to determine [10] what effect due to the lattice mismatch [11] or due to the lattice mismatch [11] will affect. Elastic deformation has long been an able tool for revealing morphology [12–15]. Additionally, the elastic deformation [16] can also provide useful information about the shape of clusters incorporated in a matrix with low thickness and the ability to predict such properties are of great importance for practical applications. There are two ways to predict the electronic structure of the system: one way is to calculate the energy of the system and the electronic structure of the Al₂O₃ ($\lambda = \text{H}_2$, Li , and Na) and Ag ($\lambda = \text{Au}$) layers supported by MgO (M1) which can predict the electronic structure of the system. However, we are interested in the electronic structure of the supported layer (M2).

With respect to the electronic structure of the supported layer we investigated the energy of the system with respect to the interaction between the supported layer and the underlying layer, we investigated the energy which we provide with CO₂. After the comparison of the energy of the system with respect to the interaction between the supported layer and the underlying layer, we calculated the energy of the system with respect to the interaction between the supported layer and the underlying layer.

2. Computational details
The calculations were performed using the 'VASP' code implemented in the Quantum ESPRESSO package.² Within the Perdew-Burke-Ernzerhof³ (PBE) functional, Hartree-Fock theory was used to describe the exchange correlation energy. The energy cut-off was 35 Ry, while the charge density cut-off was 40 Ry. The four-layer supercell with a $4 \times 4 \times 1$ k-point grid was used to reach a convergence criterion of 10^{-5} eV . All calculations were performed within the framework of the density-functional theory (DFT). The point charge model was adopted for the calculation of the three-layer structure of the M1 layer.

We used the standard VASP calculator to calculate the energy of the system with respect to the interaction between the supported layer and the underlying layer, we considered the energy of the above system with respect to the bulk phase of the system that is removed from the surface layer (i.e. its value). In this case, one can immediately compare the stability of a system with respect to the bulk phase with the stability of the system with respect to the surface layer. Additionally, PdAu core-shell structure was modelled using 3-layer $3 \times 3 \times 1$ slabs with outer

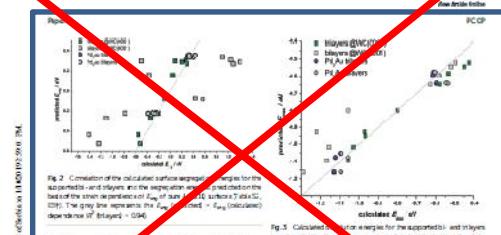


Fig. 2. Correlation of the calculated surface segregation energies for the supported M2 layers on MgO-Al₂O₃ substrates (e_{s,cal}) versus the predicted surface segregation energies for the supported M2 layers on MgO-Al₂O₃ substrates (e_{s,pred}) where 1 = Cd (Au) and 2 = MgO (Al₂O₃) (calculated dependence of obtained = 0.64).

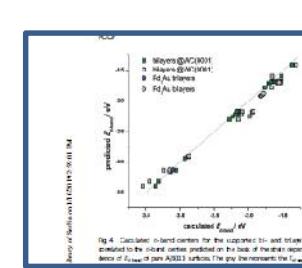


Fig. 3. Calculated vs. calculated log-log plot for the supported bi- and tri-layered surfaces on the basis of the radius of gyration R_g on the calculated dependence of E_{Au-Ag} on the basis of obtained = 0.94.

based on the amount of oxide they experience on the studied substrates. The obtained correlations between the predicted and explicitly calculated $R_{g,\text{cal}}$ and $R_{g,\text{pred}}$ for supported MgO layers are given in Fig. 3. Again, it can be seen that the proportion of oxygen atoms of the MgO layer, the radius of gyration $R_{g,\text{cal}}$ and the radius of gyration $R_{g,\text{pred}}$ are well correlated with calculated values.

Finally, while the present calculations are performed for the single packed monolayer of FCC transition metals, we want to emphasize that the proposed methodology can be applied to other structures as well.

With the application of the presented methodology film oxidation is more interesting because, the atoms with the second coordination sphere might be more sensitive to the local environment and the local environment may play a dominant role in determining stability and catalytic activity. However, in the case of larger metallic surfaces such as a significant fraction of well-defined surface points may be covered by atoms that are not in the first coordination shell. We can use the present methodology to predict the local properties at the same time, the possibility of an edge terrace in order to take the atomic rows not be disregarded.⁴ However, the results regarding the surface area occupied by the terrace may not yet be available for these edges.

Nevertheless, the terrace areas may be small.

Another interesting point is that the surface areas of these surfaces are greatly influenced by the chemical composition and the local environment, and the local environment may already after several atomic layers.⁵ In this sense, it might be anticipated that a nanoparticle surface faces have the extended surface when far enough from the edge.

4. Conclusions

We have demonstrated that a number of useful properties of this supported film can be reliably predicted using a local surface as model, considering that in the class of the supported film is sufficiently large and the distance to which

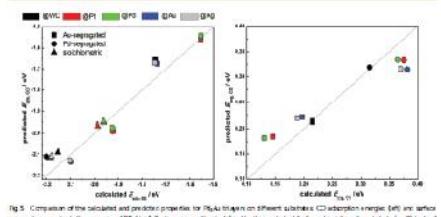
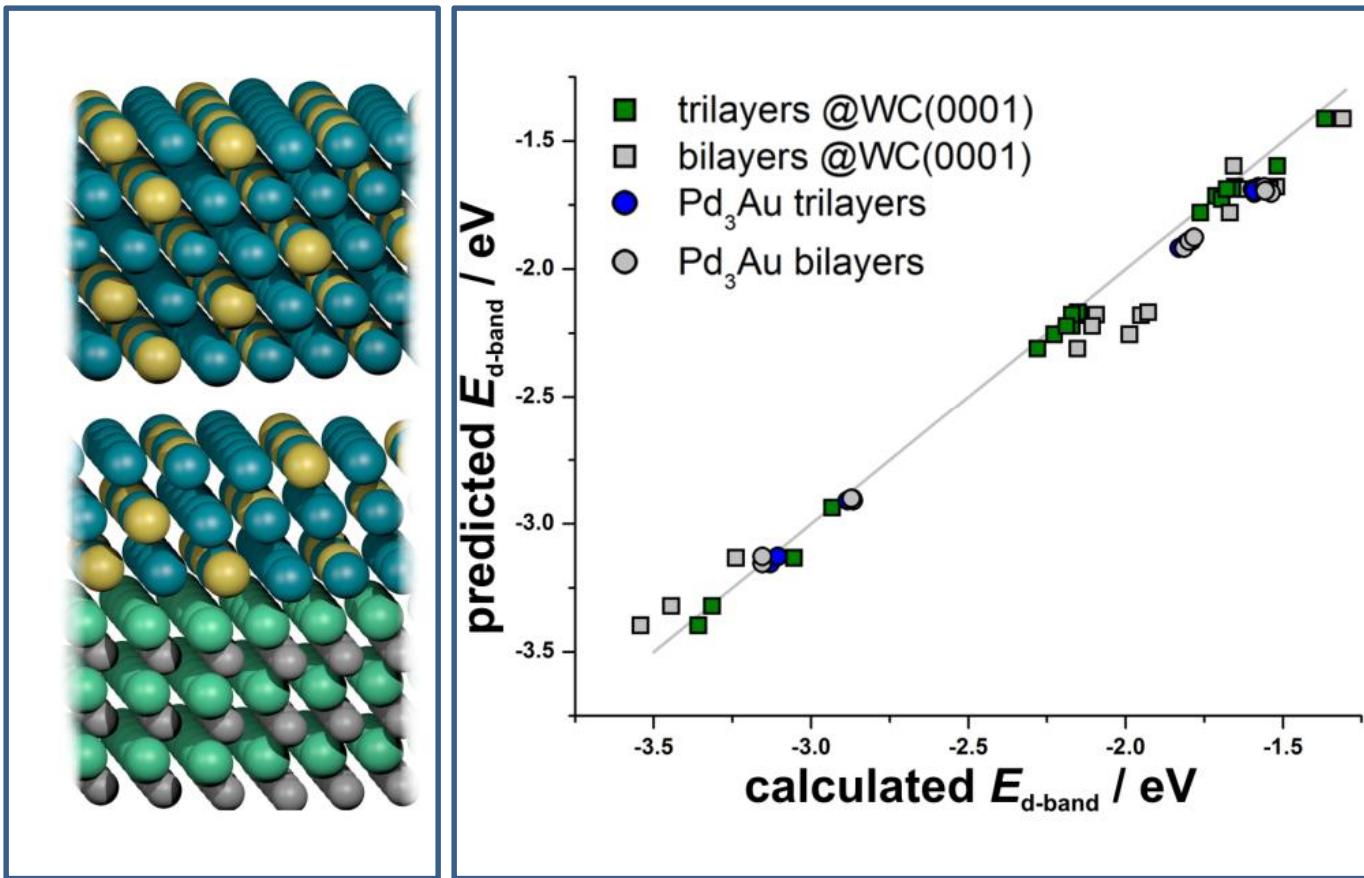


Fig. 4. Calculated vs. calculated log-log plot for the supported bi- and tri-layered surfaces on the basis of the radius of gyration R_g on the basis of obtained = 0.94.

workaround,⁶ there will always occur errors. The quality of these surfaces is greatly influenced by the chemical composition and the local environment, and the local environment may already after several atomic layers.⁵ In this sense, it might be anticipated that a nanoparticle surface faces have the extended surface when far enough from the edge.

5. Conclusions
We have demonstrated that a number of useful properties of this supported film can be reliably predicted using a local surface as model, considering that in the class of the supported film is sufficiently large and the distance to which

OK, sada malo ozbiljnije



Istraživanje

- Identifikacija tematike/Pretraga literature
- Postavka eksperimenta
- Izrada eksperimenta
- Analiza i diskusija rezultata
- Priprema publikacije
- **Proces publikovanja**

Proces publikovanja

- Korak 1 – pošaljite manuscript u odabrani časopis
- Po pravilu, časopis će tražiti objašnjenje zašto vaši rezultati treba da budu publikovani baš kod njih.

Cover letter

Question Asked 5 years ago



Subramanyan Namboodiri Varanakkottu
32.34 · National Institute of Technology Calicut

How important is the cover letter when submitting an article to a journal?

Any thoughts/experiences on the importance of cover letters to the editor when submitting a paper? What are the major points we should include there? Do editors reject a paper based on the quality of the covering letter?

Scientific Publication

Journal Articles

Journal Editing

Academic Writing

Peer Review



Linas Balciauskas
Nature Research Centre

5 years ago

Point of view of editor:

- if system asks for the cover letter, better to make it not formal, like "please find manuscript for publication"
- if not, I will gladly see cover letter, explaining position of the author about his paper, why journal was chosen, if there is any conflicts of interest, possible reviewers, NOT recommended reviewers and WHY, etc.
- just e-mail and manuscript files make me think, that author do not care about his paper.

[6 Recommendations](#)

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- A VERY BRIEF (<100 words) DESCRIPTION OF THE ESSENCE OF YOUR APPROACH;
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◆◆◆

Cover Letter

Lattice mismatch as the descriptor of segregation, stability and reactivity of supported thin catalyst films

Edvin Fako^{a,b}, Ana S. Dobrota^a, Igor A. Patti^{a,*e}, Núria López^b, Slavko V. Mentus^{a,c} and Natalia V. Skorodumova^{d,e}

 Author affiliations



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Abstract

The increasing demand and high prices of advanced catalysts motivate a constant search for novel active materials with reduced contents of noble metals. The development of thin films and core–shell catalysts seems to be a promising strategy along this path. Using density functional theory we have analyzed a number of surface properties of supported bimetallic thin films with the composition A_3B (where A = Pt and Pd, and B = Cu, Ag and Au). We focus on the surface segregation, dissolution stability and surface electronic structure. We also address the chemisorption properties of Pd_xAu thin films supported by different substrates, by probing the surface reactivity with CO. We find a strong influence of the support in the case of mono- and bilayers, while the surface strain seems to be the predominant factor in determining the surface properties of supported trilayers and thicker films. In particular, we show that the studied properties of the supported trilayers can be predicted from the lattice mismatch between the overlayer and the support. Namely, if the strain dependence of the corresponding quantities for pure strained surfaces is known, the properties of strained supported trilayers can be reliably estimated. The obtained results can be used in the design of novel catalysts and predictions of the surface properties of supported ultrathin catalyst layers.

Dear Editor,

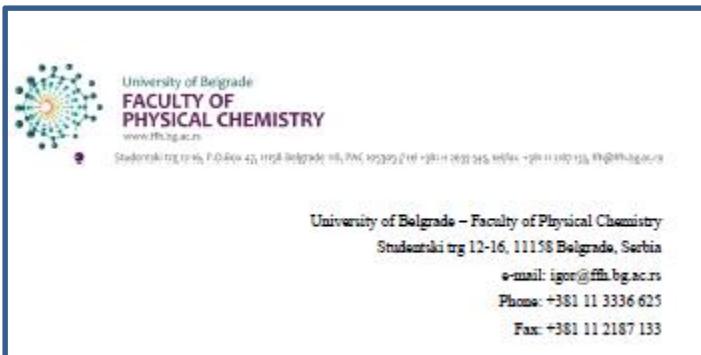
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Core-shell architectures are crucial to reduce the use of expensive metals in catalysis. Typically the core can be prepared by a cheap material while the shell is the active phase containing one or two metals. By means of Density Functional Theory we have investigated the properties of thin supported bimetallic catalyst films, focusing on the segregation, dissolution and the electronic structure. We show that already for shells formed by alloy trilayers the parameters with decisive role for catalyst performance can be reliably estimated on the basis of lattice mismatch between the support and the overlayer. Namely, by comparing the calculated segregation energies, dissolution energies and the d-band center for the supported bimetallic layer with the estimated ones using the database for pure strained bimetallic systems, we conclude that the effects of support fade for trilayers and supported films behave like pure strained surfaces. We also show that similar conclusion holds for the adsorption as shown when using CO as a probe molecule. We hope that the content of the present manuscript can be of high interest for the readership of *Physical Chemistry Chemical Physics*.

All the authors have agreed on the contents of the manuscript and approved its submission. The article has not been submitted to any other journal. No conflict of interest exists in connection with this article.

With best regards,
Dr. Igor A. Patti

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Autori imaju instituciju koja stoji iza njih

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Šta bismo hteli

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Zašto i kako

Cover Letter



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Rezultati

Cover Letter



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Malo pohvalite časopis

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Tehnički detalji, etika u publikovanju

Da probamo



vs.



The University of Maximegalon
Maximegalon Institute of Slowly and Painfully Working Out the Surprisingly Obvious

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**Krv, Sreća,
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