Getting Your Paper Accepted

Jesse V. Jokerst, PhD

Department of NanoEngineering

University of California, San Diego
My Credentials

- Assistant Professor at UC San Diego
- Grants: $3.5M USD in two years
- Training at UT Austin (PhD in Chemistry) and Stanford (Postdoc in Radiology)
- [http://jjokerst.eng.ucsd.edu/publications](http://jjokerst.eng.ucsd.edu/publications)
- ~ 40 papers, around 150 peer reviews written
- H-index of 19; i10 of 24; ~3400 citations
- Perhaps 10 rejections

![Citation indices chart](chart.png)
Scope of the Presentation

Overview of the Past, Current, and Future State of English Journal Publishing

Examination of the Review Process from The Scientists Editor’s and Reviewer’s Perspective

Frequent Organizational and Writing Errors

Tips for Successful Writing in the 21st Century
Papers → Results → ¥ → $ → Grants → Papers
Goals

- Advice abounds on the internet
- Videos, articles, blog posts produced by publishers
  - does not account for human nature
  - overemphasis on the sanctity of the peer review system
    - assumes the author is usually wrong
    - or simply complaining
- Inherent asymmetry in the process: you spent a year on a paper; the reviewer spent an afternoon (if you’re lucky)
- It is very possible that the reviewer doesn’t “get it,” but that may be because the author didn’t explain it (sell it) well!
- Sometimes the reviewer is just a crank
What Makes a Good Paper

- We are assuming that the work is worth submitting
  - good science is a necessary *but not sufficient* criterion for acceptance

- The purpose of a paper is to instruct the reader and ultimately to change their behavior
  - to use your technique
  - to interpret their results in light of yours
  - to do *something* different

- Mistake: to assume a paper is archival and to get it out the door just for another paper
More Details

- All co-authors must read final version and agree with the conclusions
- To a zeroeth order approximation, you will be judged on the quality of your figures
  - the reader is not going to study your figures → the meaning must be obvious, since they will look there first
  - use fonts that seem absurdly large until shrunken to one column
  - look at other plots, micrographs, schematic drawings from your group and copy the style
- Eliminate jargon or define it early and without other jargon
  - your audience is a first-year graduate student in your field
- Read the prose out loud before submitting
Copyediting

- The copyeditor will do all this stuff, but if you do it all for the reviewers, you will look savvy and well prepared.

- Variables are italicized $PV = nRT$

- Superscripted references go outside the punctuation when placed at the end of a sentence.\(^5\)

- In the US, commas and periods go inside “quotation marks.” In the UK, they “go outside”.

- One space after a period

- Double space drafts

- Put final few drafts into template!
  - if no template, put figures near where they are mentioned in the text
Templates are Awesome

**Photoacoustic Imaging of Human Mesenchymal Stem Cells Labeled with Prussian Blue—Poly(L-lysine) Nanocomplexes**

Taeho Kim, Jeanne E. Lemaster, Fang Chen, Jin Li, and Jesse V. Jokers

1Department of NanoEngineering, Materials Science Program, and Department of Radiology, University of California, San Diego (UCSD), La Jolla, California 92093, United States

**Supporting Information**

**ABSTRACT.** Acoustic imaging is affordable and accessible without ionizing radiation. Photoacoustic imaging increases the contrast of traditional ultrasound and can offer good spatial resolution when used at high frequencies with excellent temporal resolution. Prussian blue nanoparticles (PNPs) are an emerging photoacoustic contrast agent with strong optical absorption in the near-infrared region. In this study, we developed a simple and efficient method to label human mesenchymal stem cells (hMSCs) with PNPs and imaged them with photoacoustic imaging. First, PNPs were synthesized by the reaction of FeCl₃ with K₃[Fe(CN)₆], in the presence of citric acid and complexed with the catonic transfection agent poly-L-lysine (PLL). The PLL-coated PNPs (PLL–PNP nanocomplexes) have a maximum absorption peak at 715 nm and could efficiently label hMSCs. Cellular uptake of these nanocomplexes was studied using bright field, fluorescence, and transmission electron microscopy. The labeled stem cells were subsequently differentiated into two downstream lineages of adipocytes and osteocytes, and they showed positive expression for surface markers of CD90, CD105, and CD13. No changes in viability or proliferation of the labeled cells were observed, and the secretion of cytokines and biomarkers analysis indicated that the expression levels of 12 different proteins were not dysregulated by PNP labeling. The optical properties of PNP were preserved following cell labeling, and the labeled stem cells were found to have excellent optical properties. In vivo, the labeled stem cells were successfully tracked in the subcutaneous space for extended periods, and the labeled cells were found to have excellent optical properties. In vivo, the labeled stem cells were successfully tracked in the subcutaneous space for extended periods, and the labeled cells were found to have excellent optical properties. In vivo, the labeled stem cells were successfully tracked in the subcutaneous space for extended periods, and the labeled cells were found to have excellent optical properties. In vivo, the labeled stem cells were successfully tracked in the subcutaneous space for extended periods, and the labeled cells were found to have excellent optical properties.

**Keywords:** cell tracking, molecular imaging, mesenchymal stem cell, Prussian blue nanoparticles, photoacoustic, contrast agent

---

**Organosilica Nanoparticles with an Intrinsic Secondary Amine: An Efficient and Reusable Adsorbent for Dyes**

Fang Chen, Eric Zhao, Taeho Kim, Junmin Wang, Ghamin Habble, Philip James Thomas Reardon, Soundaram Jeeravarthiram Ananthakrishna, Tianyu Wang, Santiago Arconada-Alvarado, Jonathan C. Knowles, and Jesse V. Jokers

1Department of Nanoengineering, Materials Science Program, and 2Department of Radiology, University of California, San Diego, 9500 Gilman Drive, La Jolla, California 92093, United States

2Department of Biomedical and Time Engineering, UCL Eastman Dental Institute, University College London, Gower Street, London, WCIE 6BT, UK

**Supporting Information**

**ABSTRACT.** Nanomaterials are promising tools in water remediation because of their large surface area and unique properties compared to bulk materials. We synthesized an organosilica nanoparticle (OSNP) and tuned its composition for anionic dye removal. The adsorption mechanisms are electrostatic attraction and hydrogen bonding between the amine on the OSNP and the dye, and the surface charge of the OSNP can be tuned to be either cationic or anionic. Using phenol as a model dye, we studied the effect of the amine group, pH, ionic strength, dye concentration, and nanoparticles mass on the adsorption. The theoretical maximum adsorption capacity was calculated using the Langmuir model. The experiment maximum adsorption capacity of OSNP was 175.44 mg/g 0.47 mmol/g, which is higher than 67 mg/g of untreated adsorbents. The experiment maximum adsorption capacity of OSNP was 175.44 mg/g 0.47 mmol/g, which is higher than 67 mg/g of untreated adsorbents. Furthermore, the nanoparticle has high adsorption and slow dye removal and recovery efficiency over at least 10 cycles. In summary, the novel adsorbent system derived from the intrinsic amine group within the frame of OSNP is reusable and tunable for anionic or cationic dyes with high adsorption capacity and fast adsorption. These materials may also have utility in drug delivery or as a carrier for imaging agents.

**Keywords:** organosilica nanoparticles, phenol red, adsorbent, water remediation, nanomaterials

---

**INTRODUCTION**

Industrial effluents can contain organic molecules, inorganic compounds, and polymers that pollute water intended for human consumption. This has led to numerous health challenges, including stomach cancer and environmental toxicity. Colorants are especially challenging to remove because they are designed to be chemically stable, nonreactive, and resistant to fading. Colorants are used in many industrially important activities such as the manufacture of paper, textiles, and leather, as well as food processing, cosmetics, and plastics. Thus, significant efforts have been dedicated to remediation technologies that can remove colorants from water. There are many structural variations of colorants, including acidic, basic, disperse,azo, diazo, anthraquinone-based, and metal complex. Typically colored, water-soluble organic dyes are the most difficult to remove from wastewater because they are rarely affected by conventional treatment schema based on biological degradation in sewage treatment plants. Next generation systems include chemical methods such as oxidation, reduction, or photothermal/photocatalytic degradation of. Of these dye degradation is more common, but the resulting aggregate is often difficult to separate from the solution. Biological treatments can be cost-effective, but are also time-consuming, specific to the type of biotic degradation, and can result in toxic byproducts.

Physical methods are often more cost-effective and are used for chemically stable dyes. These methods include membrane separation, adsorption, and adsorption. Adsorption is particularly common because of its reliability and affordability. The most common adsorbent is activated carbon, but it is relatively expensive and is difficult to reuse. A variety of natural carbon sources have also been proposed including peat, wood, coal, etc., which are low cost but require long reaction times. More recently, mesoporous silica nanoparticles have been prepared as an adsorbent for dye remediation.

---

**Received:** March 24, 2017  **Accepted:** April 19, 2017  **Published:** April 19, 2017

**© 2018 American Chemical Society**

---

**ACS Nano**  **11** (6), 2198-2208 (2017)  **DOI: 10.1021/acsnano.7b00009**
Abuse of Templates…

Described herein is an efficient and practical method for the preparation of milk-derived chocolate milk product without the need for costly spoon-washing techniques. Though the experimental procedure tested in this work utilized reduced fat (1% milkfat) milk, it is expected to be applicable to all of the different flavors, even skim milk, which is dull and flavorless, unless you have high cholesterol and are forced to like it.

The rising costs of dishwashing detergent, the need for large amounts of water, and the time and energy associated with stirring activities represents the need for a major paradigm shift in the area of self-prepared flavored milks. The necessity for chocolate milk to accompany a Jiffy® muffin for dessert provided the impetus for this work. A procedure developed in Hilton, NY¹ was modified for the smaller scale production of single serving Hershey’s syrup-promoted catalysis of regular milk into chocolate milk. The procedure is versatile enough to be applicable with minor modifications to the preparation of strawberry milk, should anyone wish to pollute his body with gross pink shit.

In a typical experiment, similar to that described by Geraldievich, et al.² Hershey’s syrup I was charged into the Boston Bruins receptacle 2 (figure 1).³ To the neat viscous brown material was added an equal volume of reduced fat Garlick Farms (1%) milk.⁴ The heterogeneous phases were stirred externally by the gentle but firm sloshing in a circular manner by hand until such time as the two phases coagulated 3 (ca. 7 seconds on this scale). The cup is tilted 20° to the vertical, and the homogeneous diarrhea-like intermediate was immediately quenched with additional milk ⁴ such that the total liquid level did not exceed the volume of the plastic cup.

The material was a light brown homogeneous mixture and was ready for human consumption to alleviate common muffin-promoted chocolate milk hangovers. A typical consumption experiment goes as follows: Doolberg ⁵ ingests an amount of material such that the total volume does not exceed its mouth capacity. Doolberg metabolizes the liquid and is happy.

This method has proven to yield concentration-controlled installation of chocolate syrup to reduced fat milk without the need of internal spoon-assisted stirring. Efforts to apply this methodology to other chocolate-modified milks in various fat contents or container sizes are underway and will be reported in due course.

Acknowledgements. Milk and chocolate syrup were obtained by the generous support of the Arnold and Mabel Beckman Foundation and by the National Institutes of Health. Thanks goes to the FleetCenter in Boston, MA for generously providing the souvenir cup that DIL has gotten way too much use out of. TRC thanks DIL for the free publication.

Supporting Information Not Available: No spectra (¹H and ¹³C NMR, HRMS, FTIR, and optical rotation) available free of charge via the internet at http://people.bu.edu/djlipomi.

---

² Churches of other sports teams were not tested. However, with modification, the procedure should be transferable to other types of stadium sunshine beverage containers.
³ 1% Milk may be substituted here with tap water or hog lard, should one wish to prepare chocolate tap water of chocolate hog lard, respectively.
Hierarchy in Scientific Results

- Top General Interest Journals (Science, Nature)
- Best Journals in the Field of Study (most widely read and cited)
- Other Journals
- Refereed Books
- Conference Proceedings and Other Books & Book Chapters

Modified From Randal Filer, Iset Policy Institute
## Journals versus Book Chapters

### Journals

- **Editorial Goals:** Journal editors are looking for something new and original that will receive considerable interest and citations (drives impact factors).
- **Advantages**
  - Peer review typically significant
  - More widely distributed
  - Cited and read more frequently
  - More available online
- **Disadvantages**
  - Page and figure limitations

### Book Chapters

- **Editorial Goals:** Book editors are looking for materials that sells to as large as audience as possible.
- **Advantages**
  - Typical less restrictive on length and figures
  - Author association with topic
- **Disadvantages**
  - Lower quality reviews
  - Less reputable
  - Less well distributed
  - Often require longer publication times
  - Less availability online

[www.letpub.com](http://www.letpub.com)
Peer-Reviewed Journals

English Language Journals

- ~28,100 peer-reviewed journals (all fields) (Plume & Van Weijen, 2014)
- Publish ~2.5 million articles per year
- ~3.5-4.5% increase in published articles
- CrossRef database includes ~55 million journal articles

Thomson Reuter’s Journal Citation Reports (most cited journals)

- 10,900 journals
- 2,550 publishers
- 8,700 are science related
- 3,200 are social science related
- 1.5 million articles published per year collectively
Peer-Reviewed Journals

- Method of sharing data and discoveries
- Maintain quality of science – allow only sound research to be disseminated
- Serve as an archive for scientific data and discovery
- Provide author services
  - Register author’s findings/discoveries (precedence)
  - Serves as a indicator of researcher’s impacts on field
    - primary reasons for publishing was to obtain funding and furthering author’s career.
Publishing: The Perfect Business Model (Scam?)

- Libraries/Universities pay them for access
- Advertisers pay them for ad space
- Authors pay them for page charges
- Authors do the work (for free)
- Reviewers do the work (for free)
- Pay Editors poorly

- This is why I *strongly* prefer non-profits . . . American Chemical Society, Materials Research Society, American Cancer Society, etc.
Wide range of publishers

- Globally, 5000-10000 journal publishers
- ~650 main English-language publishers
- 73% are not-for-profit
- Only publish 20% of journals
- 80% of journals published by for-profit publishers
  - 9,240 journal of total 11,550 (English)
  - Elsevier - ~25% of total science titles

Revenues are often high – US $25.2 Billion
- US $10 Billion for journals
- US $5 Billion in books

Data from STM, 2015
Impact Factor

- Formulated by Eugene Garfield, founder of the Institute of Scientific Information (ISI)
- Produced by Thomson Reuters and Published Annually in the ISI Citations Reports (starting in 1975), for journals indexed in ISI databases (Web of Science/Knowledge)
- It is the average number of times each paper published in that journal is cited during the preceding two years by other indexed journals

Example:

Impact Factor 2014 =

# of times that all papers published in journal in 2012 & 2013 were cited in indexed journals 2014

# of articles published in that journal in 2012 & 2013
Impact of Increased Publication Volume on Scientists

Fallout of digital publishing and distribution

- Access to papers has, in general, increased and is dominated by online sources
- A larger number of journals combined with a larger volume of published articles has made it more of a challenge for our papers to get noticed

Not only do we need to get published, but we need to do it in such a way that the papers we publish will get read.
Balancing Quality, Quantity, and Professional Success

Quantity versus Quality

International Standard: To Maximize Quality

Academic/Institutional Demands Quantity
Always Strive to Maximize Quality

Research I Universities in the US require about 2 papers per year in refereed journals for Promotion & Tenure

Reasons to Maximize Quality over Quantity

- You can publish a million papers, but if the papers are not of high quality, few other scientists will follow your works.
- Good works get lost in the mix of lower quality articles.
- First impressions count – especially important for early career scientists.
Time Required for Publication

Acceptance times varies by discipline
Journal Selection Model

After Linda V. Knight and Theresa A. Steinbach, 2008

Most Successful Journals

Impact Factor

High Impact

Low Impact

“Good Long-Term Selection”

Best Selection

Worst Selection

Most Probable Acceptance

Time for Acceptance

Short

Long
Typical Peer Review Process

1. **Author** selects a journal and submits their paper.
2. **Editorial Office** performs an initial review.
3. Checks for:
   - Consistency with Journal's Aims
   - Scientific Merit
   - Presentation Quality
   - Plagiarism/Duplicity
4. **Editorial Board** (Member Assigned)
   - Review, Comment, Recommend
5. **Author** revise or reject based on recommendation.
6. **Editorial Office** final decision:
   - Accept for Review
   - Reject
7. **Reviewers** (Advisors)
   - Review, Comment, Recommend
8. **Editorial Board** (Decision Makers)
9. **Author** revise or reject.
10. **Editorial Office** final decision:
    - Reject
    - Accept
11. **Article Published**
12. **Review Galley Proofs**
13. **Published**
Journal Editors

Duties/Tasks

- Find papers to fill journal pages; required to make a profit or kept journal solvent
- Maintain the journal’s reputation by accepting high quality papers

- Few financial benefits; often serve for free
- Editorial duties are just one of many demands on editors’ time:
  - Managing manuscript flow (deadlines)
  - Working with authors and reviewers
  - Other teaching, research, and/or managerial responsibilities

The Editor’s Job is Made Easier by High Quality Papers – They Want to Accept Your Paper!
Paper Triage: Appearances Matter

Performed to Save Time and Effort

- Paper inconsistent with journal’s aims and goals
- Manuscript does not follow submission guidelines
  - Length, figure number or quality, key elements (e.g., title, key words, section headings)
- Paper has been submitted elsewhere or is very similar to a previously published article
- Manuscript is poorly written or organized such that the paper is difficult to comprehend
**Typical Peer Review Process**

1. **Author** selects journal & publisher.
2. **Author** submits paper.
3. **Editorial Office** performs initial review.
4. Checks for:
   - Consistence with journal’s aims
   - Scientific merit
   - Presentation quality
   - Plagiarism/duplicity
5. **30 – 40% Rejection by Many Journals**
6. **Reject Paper**
Identifying a Primary Editor

- Associate Editor or Editorial Board
- Reviewers (Review, Comment, Recommend)
- Author Revise

- Typically 1 or 2 reviewers
- Advisory role only

- Blind-Review: Authors do not know the reviewers
- Double-Blind Review: Authors do not know the reviewers & reviewers do not know the authors
• Typical review takes 4-5 hours; 8+ hrs for less experienced reviewer (STM, 2015)

• Reviewing is unpaid professional service to the discipline for which there is little reward
  • Editors often ask 6 scientists to find 2 reviewers

• Like editors, reviewers have numerous other time commitments
  • Research, writing, teaching, advising students, etc.

• Reviewers want to review papers that are easy to read, well-organized and describe novel “cutting-edge” research
  • They Want to Accept, Not Reject, Your Manuscript
The Players

- Any submission involves the interplay of three roles
  - The author
  - The editor
  - The reviewer(s) (usually 2-4 of them)

- The editor is usually a mid-career or senior scientist

- Some publishers (e.g., Nature, Wiley-VCH) use professional editors, as do some journals within publishers (e.g., *Energy & Environmental Science*)

- Editors are often your colleagues

- The roles revolve; most authors are reviewers several times per paper they submit
Where to Submit?

- Choice of journal should be made realistically
- Okay to push the envelope a little bit
- Not every paper belongs in *Science*
- Aiming too high annoys editors, and wastes your time
Goal of the Cover Letter

- Get it sent out of review
- Make the editor an advocate

Remember:
- You have been working on this for 6-24 months.
- But this is the first the editor is seeing it.

Thus, the cover letter needs to explain problem AND solution while building enthusiasm
Goal of the Cover Letter

- Novelty and significance of the work
  - What has been done
  - How it was received by the community
  - Fundamental limitation of existing technology

- How the work solves these problems
  - Is it the first or best?

- Why the paper is appropriate for this journal
  - Previous papers
  - How were they cited?

---

The Art of the Cover Letter

I have now served as an Associate Editor at ACS Nano for three months. As promised, I have provided unique insights into scientific publishing. Interestingly, the biggest surprise has not been something that authors do, but something they frequently neglect to do: constructing a well-written cover letter, including a statement justifying the importance of their work.

http://pubs.acs.org/doi/full/10.1021/nn100907e
Cover Letter for a Paper

• Find a good example from your group
  • Different fields have different conventions

• Same thing as other writing: revise, revise, revise

• Proofread

• Word limits?

• Figures?
The Cover Letter

- Written to the editors; some journals call it the “letter to referees”
- Address them as human beings
- Not a recapitulation of the abstract (the editor has it already)
- What did you *really* do and why did you *really* do it?
Dear Editor,

Heparin anticoagulation therapy is an indispensable feature of clinical care, yet has a narrow therapeutic window and is the second most common ICU medication error. The active partial thromboplastin time (aPTT) monitors heparin, but suffers from long turnaround times, a variable reference range, limited utility with low molecular weight heparin, and poor correlation to dose. Here, we describe a photoacoustic imaging technique to monitor heparin concentration in real time using methylene blue as a simple and FDA-approved contrast agent. We found a strong correlation between heparin concentration and photoacoustic signal measured in phosphate buffered saline (PBS) and in blood ($R^2>0.97$). Clinically relevant heparin concentrations were detected in blood with a detection limit of 0.28 U/mL. We validated this imaging approach by correlation to the aPTT (Pearson’s $r = 0.86$; $p<0.05$) as well as with protamine sulfate treatment. This technique also has good utility with low molecular weight heparin (enoxaparin) including a blood detection limit of 72 µg/mL. Finally, we described a nanoparticle-based hybrid material that can immobilize methylene blue for potentially applications as a wearable/implantable heparin sensor to maintain drug levels in the therapeutic window. To the best of our knowledge, this is the first report to use imaging data to monitor anticoagulation and the first use of photoacoustics as a tool for therapeutic drug monitoring.

Sincerely,

Jesse Jokerst
April 25, 2016

Dear Editor,

Heparin anticoagulation therapy is a cornerstone of surgical and cardiovascular medicine because of its short half-life, reversible nature, and low cost—there are over 500,000,000 doses given annually worldwide. However, heparin therapy also suffers from a narrow therapeutic window and is the second most common medication error. This can result in hemorrhage and bleeding during overdose and emboli and clotting during underdose.

For these reasons, heparin therapy is monitored by the partial thromboplastin time (PTT) test—an in vitro test that requires venipuncture and large (>1.5 mL) blood volumes. The PTT suffers from long turnaround times, a variable reference range, limited utility with low molecular weight heparin, and poor correlation to dose. Thus, it can take a very long time for patients to reach the therapeutic window (Fig. 1). This is especially problematic in pediatrics because their hemostasis system is rapidly changing, and they do not have sufficient blood volume for repeat testing.
The work described here solves these major limitations. We identified a solution to monitoring anticoagulation using imaging rather than in vitro diagnostics and have detailed this in a manuscript entitled, “Imaging Anticoagulation: Real-Time Photoacoustic-based Measurements of Clotting Time for Therapeutic Drug Monitoring” submitted for publication in *Nature Communications*. This system is based on the simple, yet remarkable discovery that clinically approved phenothiazinium dyes produce dose-dependent photoacoustic signal when bound to heparin. We first validated this approach in buffer and blood, and then developed a novel nanoparticle-based material that could be coated onto venous catheters. These will not only deliver heparin, but also monitor heparin to quickly titrate the dose into the therapeutic window (Fig. 1). The strengths of this approach include a rapid turnaround time, excellent sensitivity, good correlation to hemostasis, and flexibility with both heparin and low molecular weight heparin.

Fig. 1. The use of imaging in drug monitoring. The current approach (red square) to heparin monitoring involves peaks and troughs. Because the frequency of blood-based testing is low, it takes a very long time to reach the therapeutic window (safe and effective; green dashed box). Monitoring heparin via real-time imaging (blue circles) will quickly reach and maintain drug levels in the therapeutic window.
We hope that you find this manuscript suitable for publication in your prestigious journal. We understand that the primary function of Nature Communications is to publish the most exciting advances in cross-disciplinary fields. This paper combines nanotechnology, bioengineering, medicine, and imaging, and we think it is ideally suited for the readership of the journal.

We also note that there have been multiple recent publications in Nature series journals describing photoacoustic imaging (de la Zerda, Wilson, Pu, Kircher, Conkey, Lai, etc., etc.). These papers have garnered many citations because of the importance of photoacoustic imaging to medicine and biomedical engineering. However, we must emphasize that the work enclosed here is not an incremental extension of our existing work or the community’s existing work. Indeed, the main elements of novelty and significance include:

1) the first description of photoacoustics for therapeutic drug monitoring;
2) the first report to use imaging to study anticoagulation therapy; and
3) the first report to describe photoacoustic signal in a device.

We think that these elements—combined with the incredible common use (and misuse) of heparin by the medical community—make this paper very significant to persons studying cardiovascular disease, clotting disorders, imaging, contrast agent development, and biosensors.

On the following page we suggest potential reviewers who may be helpful. We sincerely appreciate your consideration.
Reviewers and Editors

- Usually a journal will allow you to suggest reviewers
  - the editor does not have to take your suggestions!

- Suggesting reviewers
  - at least five, but up to ten or more
  - ideally they are independent
    - less than half the list should be your advisor’s former students
    - people who will give you a constructive review

- Suggesting editors
  - find the associate editor closest to your topic
  - suggestions are used only sometimes
So You’ve Submitted Your Manuscript

- After a few days
  - rejected without review
  - assigned to an editor
- Then we wait for 4-8 weeks
Email Apnea: Decision on Manuscript…

- Accept as-is (almost never happens)
- Minor revisions (provisional accept)
- Major revisions (almost always accepted in the end)
- Reject and resubmit (major revisions + some hoops)
- Transfer (better than reject)
- Reject
  - they are not trying to destroy your career
  - it does not feel good now, but getting a real reaction is the only way we learn
  - *getting a reaction is key*; it helps refine your arguments
Examples of Referee Reports

Additional Questions:
Is this paper in the top 20% of manuscripts in the field?: No
If this paper is not in the top 20% of manuscripts in the field: It could be improved to be in the top 20% with further work.
Is it appealing to a broad audience?: No
Does the manuscript give a complete description of the procedures that could be reproduced by others in the field?: No
Are the literature references appropriate and up to date?: Yes
Provides significant insight into or the development of an important application: Poor
Work is original and significant: Fair
Conclusions adequately supported by data: Fair
Clarity of presentation: Poor
Potential for impact in materials science and engineering: Poor
Recommendation: Other could be revised

Comments:
Decision: Reject

The authors have synthesized Organosilica nanoparticles (OSNPs) using the different ratios of bis(triethoxysilyl) ethane (BTSE) and bis(3-trimethoxysilyl-propyl) amine (TSPA). The nanoparticles have been successfully characterized using TEM and DLS spectra. The surface charge values and surface morphology/porosity have been ascertained in terms of zeta potential and BET techniques. The as synthesized OSNPs are then used to selectively adsorb anionic dye (phenol red) from its mixture with a cationic dye (methylene blue). The maximum adsorption capacity of the OSNPs is found to be 175.44 mg/g that is claimed to be higher than 67 adsorbents among total of 77 reported adsorbents of its kind. The importance of adsorption parameters such as pH, time, dye concentration, adsorbent dosage, and ionic strength has been studied and optimal conditions have been found. The nanoparticles are found to be reusable for next 10 cycles which further strengthen their applicability. The manuscript lacks in certain ways and can be improved better. Hence it cannot be accepted to ACS Applied Materials & Interfaces with the current format. The below comments can be helpful to the authors to improve this manuscript.
1. Please add supplier details of methylene blue in chemicals section.
2. The author has used the 1:10 and 10:1 ratio of dyes in selectivity experiments. They should also explain the reason for taking such extreme ratios.
3. The time taken for 86% adsorption of phenol red over the OSNPs is very high (3 days). The use of nanoparticles in dye adsorption is advantageous when it consumes small fractions of time. In the later sections the authors have stated that 2.4 mg of OSNPs can remove 100% dye. The authors are advised to optimize the parameters (pH, nanoparticles dosage, dye concentration) to obtain least reaction time.
4. Concentrations of salt (NaCl) for ionic strength testing are very high (1, 2 and 4 M). Authors should describe the reason for choosing such high concentrations.
5. The authors have explained that why the adsorption is lowest at low (1) and high (12, 13) pH values. Whereas no reason for maximum adsorption at pH=2 and 3 has been given. The reason for lowest adsorption at pH=1 is ascertained to higher concentration of H+, that are also present at pH=2 and 3. How the authors have distinguished the two cases in terms of adsorption is absent in the manuscript.
6. Selectivity of anything means that one’s tool is specific to that analyte and it will not interact with other identical or near identical analytes. Whereas the other dye used for selectivity testing is a cationic dye. To explain the selectivity of the OSNPs, the authors should use the analytes which have at least the same charge as their target analyte.
7. Phenol red has been desorbed from the OSNPs using the NaOH solution, which indicates that NaOH can leach the dye from nanoparticles surface. For the quantification of dye using UV spectrophotometer, the authors treated the dye solution with NaOH first in order to maintain the same pH values. Wouldn’t such a practice will desorb the dye from the nanoparticles. Certain amendments in this process may lead to increased ad
The Response Letter

- Quote the referee reports verbatim
  - however, correct any typos (even if you would like to make the reviewer appear careless or dumb)
- Don’t be emotional → if you want, write what makes you feel good just for fun, and then delete the mean version
- Put everything in the response letter (it may be the only thing they read!)
- Reproduce the responses even if multiple reviewers made the same point
  - reviewers may only read the part related to their own review
- Take a few days and sleep on it
- Use the appeal process sparingly
- Don’t use the word “rebuttal” in the file or filename
September 9, 2017

Dear Dr. Lee,

Thank you for your correspondence date February 1, 2017 related to our manuscript (ID: am-2017-001408) entitled "Organosilica nanoparticles with an intrinsic secondary amine: An efficient and reusable adsorbent for anionic small molecules", submitted for publication in ACS Applied Materials & Interfaces. We appreciate all the four reviewers’ comments and your willingness to consider a re-submission.

We feel this paper would be a valuable addition to the journal because, to the best of our knowledge, there is no report detailing the use of organosilica nanoparticles (OSNP) with intrinsic amine for organic dye adsorption. Because the amine group is not only on the surface but also inside the silica frame, the OSNP retains the adsorption even after treated with basic solution.
We have thoughtfully reflected on the reviewers’ comments and have performed additional experiments, analysis, and revisions to improve the manuscript and our conclusions. The experimental section and results and discussion have been reorganized. Most figures have been modified including six new figures in the supplementary. We also have performed many more experiments to better characterize this material and support our conclusions. Below, we detail these changes and specifically address each point raised by the reviewers. Reviewers original comments precede our response in bold. However, let me first outline the eight key new experiments.

A. Inductively coupled plasma analysis to determine the loss of OSNP during desorption of phenol red by NaOH.
B. CHN analysis to determine the amount of nitrogen/amine on the OSNP made with different fraction of bis(3-trimethoxysilyl-propyl)amine.
C. Solid-state $^{29}$Si NMR spectra to evaluate the degree of condensation in the OSNP.
D. X-ray photoelectron spectroscopy analysis to determine the degree of protonation of OSNP at different pH values.
E. Dynamic light scattering to determine the zeta potential of OSNP treated with solutions from pH 1 to 13.
F. Adsorption of different dyes to determine the adsorption mechanism.
G. Short-term adsorption of phenol red at different dye concentrations to measure adsorption speed.
H. FT-IR experiments to confirm the template removal.

We think that these changes significantly improve this manuscript and now answer additional questions related to the nanomaterial properties, adsorption mechanisms, and tunable adsorption behavior. All changes to the original document are highlighted. We also include a clean version.
We hope that these changes make the manuscript suitable for immediate publication in your prestigious journal. We believe that this work now conforms to the primary function of ACS Applied Materials & Interfaces to publish the latest results in applied materials and interfacial processes that can be used for specific applications and is of great interest to the silica nanomaterial and environment communities.

Yours Sincerely,

Jesse V. Jokerst, Ph.D.
Assistant Professor
Department of NanoEngineering
University of California, San Diego
jjokerst@ucsd.edu
REVIEWER 1

Comments: The authors have synthesized organosilica nanoparticles (OSNPs) using the different ratios of bis(triethoxysilyl) ethane (BTSE) and bis(3-trimethoxysilyl- propyl) amine (TSPA). The nanoparticles have been successfully characterized using TEM and DLS spectra. The surface charge values and surface morphology/ porosity have been ascertained in terms of zeta potential and BET techniques. The as synthesized OSNPs are then used to selectively adsorb anionic dye (phenol red) from its mixture with a cationic dye (methylene blue). The maximum adsorption capacity of the OSNPs is found to be 175.44 mg/g that is claimed to be higher than 67 adsorbents among total of 77 reported adsorbents of its kind. The importance of adsorption parameters such as pH, time, dye concentration, adsorbent dosage, and ionic strength has been studied and optimal conditions have been found. The nanoparticles are found to be reusable for next 10 cycles which further strengthen their applicability. The manuscript lacks in certain ways and can be improved better. Hence it cannot be accepted to ACS Applied Materials & Interfaces with the current format. The below comments can be helpful to the authors to improve this manuscript.

We appreciate this referee for the helpful suggestions.

1. Please add supplier details of methylene blue in chemicals section.

   We regret not being more careful. We have added the supplier details of methylene blue and the new dyes we used in chemicals section. Page 3, Line 17, 19, and 20.

2. The author has used the 1:10 and 10:1 ratio of dyes in selectivity experiments. They should also explain the reason for taking such extreme ratios.

   The goal here was to study dye selectivity. Thus, we selected very extreme conditions to test selectivity. We have rewritten this section to explain our rationale. Page 11, Line 13-21.
EXPERIMENTAL SECTION

Chemicals.

Hexadecyltrimethylammonium bromide (CTAB, ≥99%), ammonium hydroxide (NH₄OH), bis(triethoxysilyl) ethane (BTSE), bis(3-trimethoxysilyl-propyl)amine (TSPA, 90%), dimethylhexadecylamine (DMHA), rhodamine B, sodium chloride, decane, and hydrochloric acid were purchased from Sigma Aldrich Inc. Phenol red was obtained from Acros Organics. Methylene blue and rose bengal disodium were purchased from the Fisher Scientific. Ethanol was purchased from VWR. Methanol was provided by Alfa Aesar. The water was Millipore grade with a resistivity larger than 18.2 MΩ·cm at room temperature (RT) unless specified otherwise.
were recorded using a Bruker AMX-600 spectrometer. X-ray photoelectron spectroscopy (XPS) analysis was performed using a Kratos Axis Ultra DLD instrument with monochromatic Al (Kα) radiation. The data was analyzed using Casa-XPS software, and two different components were fit to the N 1s signals, and the energy difference between these components was fixed at 1.8 eV. An inductively coupled plasma optical emission spectrometer (ICP-DES, Optima 3000DV, Perkin Elmer) was used to quantify the loss of OSNP during the desorption treatment with base solution. All absorbance measurements used a SpectraMax M5 spectrophotometer from Molecular Devices.

**Adsorption mechanism.** 5 mg of OSNP with different compositions, zeta potential, and surface areas were added separately to 1 mL of 0.5 mg/ml (1.33 mM) phenol red. Upon mixing, the tubes were vortexed, reacted overnight, and then the supernatants were collected after centrifugation. For the dye investigation, 1.4 mg of OSNP made of 80% TSPA were added to 0.1 mL pH 7 or pH 13 solutions, and then 0.1 mL 0.2 mM of phenol red, rose Bengal, rhodamine B, and methylene blue were added to both solutions separately. The mixtures were then vortexed, reacted for 5 minutes, and centrifuged. For the refinement of dyes, phenol red (0.04 mM or 0.4 mM) and methylene blue (0.04 mM or 0.4 mM) were mixed at three molar ratios 10:1, 1:1, and 1:10. Then OSNP (80% TSPA) were added and allowed to adsorb dyes for 5 minutes before collection of supernatants.

**Influence of crucial parameters.** We used OSNP made of 80% TSPA to study the influence of crucial parameters. We first studied the effect of pH on the adsorption. 100 µL of solutions at different pH values were added to 100 µL of 0.5 mg/ml (1.33 mM) phenol red with vortexing. These solutions were then added to 100 µL of Millipore water containing 2 mg of OSNP with standing for 10 minutes before supernatant collection.

The effect of ionic strength was also investigated. NaCl solutions of different ionic strength were created and then mixed with 4 mg/ml (10.63 mM) phenol red at a ratio of 1:2. The mixtures were then added separately to 40 mg/ml OSNP solutions at a ratio of 1:3.1. The final mixtures were vortexed, stood for 30 minutes, and then the supernatant was collected. To study the effect of time, OSNP were added to phenol red solution at a ratio of 0.5 mg OSNP: 0.1 ml dye. The dye concentration varies from 0.015 mg/ml (0.04 mM) to 2 mg/ml (5.31 mM). The mixture was vortexed, allowed to react for XXX minutes, and then the supernatant was collected.

To study the effect of dye concentration, phenol red at 0 to 5 mg/ml (13.29 mM) were prepared, and then 2 mg of OSNP were added to 200 µL of each solution. The mixtures were vortexed, reacted for 30 minutes, and then the supernatant was collected for absorption spectroscopy.

We also studied the effect of adsorbent dosage. OSNP aqueous solutions at different concentrations were made, and 100 µL of each solution was then mixed with 100 µL of 5 mg/ml (13.29 mM) phenol red. These mixtures were vortexed and reacted for 30 minutes before supernatant collection for absorption spectroscopy.

After optimization of these adsorption parameters individually, we determined the experimental maximum adsorption capacity of OSNP at pH 3 in water with 1 hour of reaction; the dye concentration was 5 mg/ml (13.29 mM), and the OSNP dosage was 1 mg.
Final Steps

- If rejected, use the appeal process sparingly
  - wait at least one day before deciding to appeal

- If accepted, correct the proofs carefully
  - make your corrections before getting to the proof stage!
  - too many corrections will delay publication ("re-proofing")

- After online posting, time to celebrate, share on social media
- Don’t read your own papers right after they’re published
- Small errors are inevitable; you will be forgiven for typos
Opinions

- Who owns the results?
- Publication fees: get out of these if possible because they are ridiculous
- Open access
  - OA journals vs. OA options
- Society journals vs. non-profit journals
- Blind reviewing
- Manuscript transfer “service”
- arXiv for mathematics & physics, no analogue for chemistry, biology, engineering
- Research funded by NIH must be publicly available (pre-copyedited version goes in a repository)
Other Resources

- ACS video series “Publishing 101” (American Chemical Society YouTube channel)
  - Especially George Whitesides interview
    - https://www.youtube.com/watch?v=q3mrRH2aS98&list=PL6544210348021339
- Andrea Armani’s website (USC)
- A PhD is Not Enough!: A Guide to Survival in Science by Peter J. Feibelman
- Writing in general
  - The Elements of Style by Strunk and White
  - The Sense of Style by Steven Pinker
Questions?