Dissertation/Thesis Webinar

Winter 2022

Note: Please refer to the Graduate Division website for the full formatting manual and other details. The following slides only provide a summary and contain information specific to Winter and Spring 2022.
Agenda

- Graduate Division Advisors
- Writing Hub
- Appointments & Degree Filing Process
- Formatting Guidelines
- Permission Letters
- ProQuest
- Q&A
Graduate Division

Jessica Whittier, Master’s Advisor (A-L)

Kim McCusker, Master’s Advisor (M-Z)

Sara Miceli, Professional Degree & Joint Doctoral Program Advisor

Van Lee-Yamamoto, Ph.D Advisor

Eliese Maxwell, Academic Affairs Assistant
Get Writing Help from the Writing Hub!

- Open to enrolled graduate students
- **Free** one-on-one appointments with a graduate student writing consultant
  - 30-60 minute appointments, up to 2 appointments/week
  - Can work with any project, at any stage
  - Supportive, in-depth conversations about your writing
    - Actionable feedback on clarity, organization, coherence, etc.
    - Not available for format-checking, will focus on the writing
- **Plus:** Dissertation Writers Workshop, Grad Writing Room, Writing Retreats, Discussion Groups and more!
- Programs offered online until further notice.

Learn more: [WritingHub.ucsd.edu](http://WritingHub.ucsd.edu)
Timeline: Snapshot

Confirm with your dept. that you are ready to defend

Start collecting coauthor permission letters

Schedule defense with committee/dept.

Make prelim. appt. with Grad Division

Prelim. appt. with Grad Division

Final review will be discussed and/or scheduled

Defend!

Complete ProQuest submission

Refer to checklist to confirm paperwork is complete

Grad Division will confirm via email when you are DONE!

Note: This is a general guide; your timeline may vary by your program and/or degree aim (master’s, PhD, etc.)
Setting up your Defense

- Work with your advisor, committee members, and graduate coordinator to set up your defense date. Through Spring 2022, all defenses may be conducted in person or remotely but the following general rules still apply:
  - A committee chair/co-chair must always be present at a final examination/defense
  - An outside member must always be present at a final examination/defense (doctoral committees only)
  - If a committee member (other than chair/co-chair or outside member) cannot make the main defense, you must present to them separately in advance of the exam date
  - Detailed information can be found on the Degree Completion page on our website
Setting up your Defense

- Always schedule your defense date around your chair/co-chair and the outside faculty member.
- Work with your graduate coordinator well in advance of your defense date to make sure the committee members listed on your student record are correct and reconstitute your committee if needed.
- Work with your advisor and graduate coordinator to ensure everything is in order for your defense, including the logistics, scheduling on Zoom, etc.

**Note:** Effective until the end of Spring 2022, any and/or all members of a master’s or doctoral committee or the student being examined may either conduct their thesis defense, qualifying examination and final oral examination (the dissertation defense) in person or remotely (meaning participation by live video teleconference).
Making Appointments

https://gradforms.ucsd.edu/calendar

- All appointments will be conducted through Zoom. Advisors will send out a Zoom link by the morning of your appointment time.
- Schedule your preliminary appointment once your defense has been scheduled. We will discuss the final document review (check-in by email) scheduling during your preliminary meeting.
- Preliminary appointments should be scheduled up to one month prior to your defense.
- If cancellations need to be made, do so 24hrs in advance.
- Contact us if you’re unable to log on so we can get you on our calendar.
- Last 2 weeks – reserved for final document reviews.
- Consider filing deadlines…Please don’t wait until the end of the quarter to try to schedule!
- Our calendar is only open 60 days in advance.
Important Deadlines

Winter 2022 Degree
- Friday, March 18, 2022

Spring 2022 Degree
- Friday, June 10, 2022

Note: The degree filing deadline is always the 11th Friday of each quarter (Summer is an exception).
Preliminary Appointment

- Upload your fully formatted draft to ProQuest prior to your appointment
  - In ProQuest, you don’t have to fill out all information to upload the draft for the preliminary appointment; create a submission, add your contact information, and upload your PDF. Other details can be filled out when you complete the submission process for the final document review (check-in by email)
- We review for edits (**Edits are common!**)
- We review academic history
- We will go through the check list of what paperwork is needed to file for graduation
Final Checklist

- Forms from your department/program (initiated on DocuSign)
  - Final Report Form (Combined Defense and Dissertation/Thesis approval)
    - Master’s students must pay a $25 thesis submission fee. This fee is not required for PhD students since it was paid during Advancement to Candidacy
    - Joint Doctoral students require JDP #5 form and Signature Page
    - Will indicate whether a filing or readmission fee is required
    - Will indicate if re-advancement and fee is required (if more than 5 years has passed since Advancement to Candidacy, usually only applies to PhD students)
  - General petition form to waive residency requirement (if applicable)
Final Checklist

- Note: Any applicable fees (filing fee, re-admit fee, re-advancement fee, Master’s thesis submission fee) will be charged to your Triton Link Financial Account at a later date. You do not have to pay this fee prior to your final review.

Your action items:

- Please work with your graduate coordinator to ensure they are aware of your defense date so that they can initiate the signing of your Final Report Form and any other required forms in DocuSign.
Final Checklist

Submit to your Graduate Division Advisor:

- Final Dissertation/Thesis submission for final review on ProQuest
- Dissertation/Thesis Release Form (upload to ProQuest submission)
- Co-author permission letters (if applicable, email them to your Graduate Division advisor in a merged PDF or zip file)
In Between Appointments

- Defend

- Complete any new edits requested by the committee. Keep in mind that minor formatting edits may *still* be necessary.

- If you haven’t already done so, collect all co-author permission letters.

- Check in with your graduate coordinator about the status of your Final Report or any other required forms in DocuSign if you haven’t received a copy.
Final Document Review (Check-in by email)

- A day prior to final document review – submit final version of your dissertation/thesis for review

- Final formatting revisions must be submitted and approved by the filing deadline

- Email your co-author permission letters to your Graduate Division Advisor and follow up on other graduation paperwork

- We’ll file your paperwork with the Registrar’s Office after the end of the quarter
The **BLUE** Book

http://grad.ucsd.edu/academics/preparing-to-graduate

Coming soon on our website…
Word templates and suggested LaTeX template page
General Specifications

- **Minimum Margins**
  - 1” on all sides, but can be set slightly larger

- **Font and Font Sizes**
  - Standard fonts are Arial, Times New Roman, Helvetica, etc.
  - May use 10pt, 11pt, or 12pt

- **Pagination**
  - All page numbers are centered at the bottom, 0.5” from the bottom edge
  - Roman numerals begin on signature page through preliminary pages, Arabic numerals begin in main body of text

- **Paragraphs**
  - All material in main body of text should be double spaced
  - All new paragraphs must be indented 0.5”
Preliminary Pages

- Title Page
- Copyright or Blank Page
- Dissertation/Thesis Approval Page
- Dedication/Epigraph
- Table of Contents
- List of Abbreviations (Symbols)
- List of Figures (Tables, Spectra, etc.)
- Acknowledgements (only if no co-authors and not published)
- Vita – optional for Masters students
- Abstract of the Dissertation/Thesis
UNIVERSITY OF CALIFORNIA SAN DIEGO

This is the Title of My Dissertation

A dissertation submitted in partial satisfaction of the requirements for the degree Doctor of Philosophy/Doctor of Musical Arts

in

My Degree Title

by

[My Name as listed on UC San Diego official Academic Records]  
(legal or preferred name is accepted)

Committee in charge:

Professor Eta Theta, Chair  
Professor Gamma Delta, Co-Chair (if applicable)  
Professor Lambda Kappa  
Professor Iota Mu  
Professor Epsilon Zeta

2020
DISSEYATION/THESIS APPROVAL PAGE

Roman numeral page numbers begin on page iii

Note: JDP students will still need signature lines

University of California San Diego
2020

0.5” from bottom of the page
# Table of Contents

Dissertation/Thesis Approval Page ......................................................... iii
 [previously called Signature Page]
Dedication (Optional) ................................................................. iv
Epigraph (Optional) ........................................................................ v
Table of Contents ............................................................................... vi
List of Abbreviations (Optional) ......................................................... vii
List of Symbols (Optional) ................................................................ viii
List of Supplemental Files (Optional, but required if uploaded with submission) ix
List of Figures (Optional, but required if included in the text) ............... x
List of Schemes (Optional, but required if included in the text) .......... xi
List of Tables (Optional, but required if included in the text) .......... xii
List of Graphs (Optional, but required if included in the text) .......... xiii
Preface (Optional) ........................................................................... xiv
Acknowledgements (Optional, but required if any text is co-authored or published or being prepared for submission) .............. xv
Vita (Required for doctoral dissertations only) .................................. xvi
Abstract of the Dissertation ........................................................... xvii
Introduction ......................................................................................... 1
Chapter 1 (Include chapter title if applicable) ................................. 10
  1.1 ............................................................................................... 19
  1.1.2........................................................................................... 26
Chapter 2 (Include chapter title if applicable) .................................. 31
Appendix ............................................................................................ 157
References ......................................................................................... 174
LIST OF FIGURES/TABLES/SCHEMES, ETC.

Max 4 lines in list(s), and numbering should be denoted by chapter or continuous.

NOTE: if captions are longer than 4 lines they must be abbreviated on the list to 4 or fewer lines. The word “Figure” (or “Table,” or “Graph”) must appear before each caption on the list and before each caption within the text.
ACKNOWLEDGEMENTS

I would like to acknowledge Professor Eta Theta for his support as the chair of my committee. Through multiple drafts and many long nights, his guidance has proved to be invaluable.

I would also like to acknowledge the “Smith Clan” of lab 28, without whom my research would have no doubt taken five times as long. It is their support that helped me in an immeasurable way.

Chapter 2, in full, is a reprint of the material as it appears in Numerical Grid Generational in Computational Fluid Mechanics 2017. Smith, Laura; Smith, Jane D., Pineridge Press, 2016. The dissertation/thesis author was the primary investigator and author of this paper.

Chapter 3, in part, has been submitted for publication of the material as it may appear in Education Mechanics, 2017. Smith, Laura; Smith, Jane D., Trailor Press, 2017. The dissertation/thesis author was the primary investigator and author of this paper.

Chapter 5, in part is currently being prepared for submission for publication of the material. Smith, Laura; Smith, Jane D. The dissertation/thesis author was the primary investigator and author of this material.

Chapter 6 is coauthored with Smith, Jane D. and White, Sigmund. The dissertation/thesis author was the primary author of this chapter.
VITA

The minimum requirement is educational information

VITA

2010 Bachelor of Arts, University of California, Berkeley
2010-2015 U.S. Marines
2015-2018 Teaching Assistant, University of California San Diego
2018 Master of Science, University of California San Diego
2018-2020 Research Assistant, University of California San Diego
2020 Doctor of Philosophy, University of California San Diego

PUBLICATIONS


FIELDS OF STUDY

Major Field: Engineering

Studies in Applied Mathematics
Professors Alpha Beta and Gamma Delta
ABSTRACT OF THE DISSERTATION/THESIS

First page of the abstract only, special top margin of at least 2.5”

ABSTRACT OF THE DISSERTATION

Place Full Title of Doctoral Dissertation Here

by

[My Name as listed on UC San Diego official Academic Records]
(legal or preferred name is accepted)

Doctor of Philosophy/Doctor of Musical Arts in Degree Title

University of California San Diego, 2020

Professor Beta Theta, Chair
Professor Alpha Beta, Co-Chair (if applicable)

The Abstract begins here. The abstract is limited to 350 words for a doctoral dissertation. It should consist of a short statement of the problem, a brief explanation of the methods and procedures employed in generating the data, and a condensed summary of the findings of the study. The abstract may continue onto a second page if necessary. The text of the abstract must be double spaced.

[Please note: If you choose to delay the release of your work, access to the full text of your work will be delayed for the period of time that you specify. The citation and abstract of your work will be available through ProQuest and through the UC California Digital Library (eScholarship). See page 44 in this manual for information regarding delayed release.]
Introduction and Beyond

CONSISTENCY

....is the key!
Chapter 1. Introduction

It is estimated that lighting accounts for 22% of the total US electrical energy use and 7% of the global primary energy expenditure. From the latest available data from the U.S. Department of Energy (DOE), it showed that more than 70% of electricity used for total lighting is for commercial and residential lighting with 85% of residential lighting using incandescent lights and fluorescent lamps, as shown in Figure 1.1. [1]. Since most of the energy used for the incandescent lamp is wasted as infrared radiation and mercury in the fluorescent lamps can cause environmental problems, there have been long efforts to improve the efficacy of the technology, as well as developing a more energy efficient light and environmental source to replace incandescent and fluorescent lighting [2].

The beginning of modern lighting technology is generally attributed to the invention of the incandescent lamp by Sir Thomas Edison in 1878 [3]. The color of light produced by a heated metal filament in an incandescent lamp appears close to that of the sun, to which the human eye has been adapted [4]. Objects illuminated under an incandescent light would appear to have a natural color. To determine the “quality” of a light source, one parameter called the color rendering index (CRI) is often used. This index, with a scale of 0 to 100, measures the ability of the light source to accurately display the color of an object compared to a standard illuminant [4]. The incandescent lamp has a high CRI of about 100, while low pressure sodium lamps have CRI of about 18 [4]. However, about 95% of the electricity used by a typical incandescent light bulb is wasted as heat and infrared radiation, which results in a low luminous efficiency of ~12 lumens per watt (lm/W) [4]. With a tungsten-halogen cycle, halogen incandescent lamps have longer filament lifetimes as the filament evaporation rate is reduced. This also allows the halogen lamps to be at full brightness for longer time and have a comparable CRI relative to the traditional incandescent lamps, resulting in more than twice the efficiency (~30 lm/W) [4]. Unlike
Figure and Table Captions

Figure 2.1. Color ranges of LEDs depending on the semiconductor composition [J].

Table 2.1. Comparison of energy efficiency, luminous efficacy (lumen/watt), lifetime, heat and presence of mercury of commonly available light sources [1]:

<table>
<thead>
<tr>
<th>Light Source</th>
<th>Incandescent</th>
<th>Halogen</th>
<th>Compact Fluorescent</th>
<th>High Intensity Discharge</th>
<th>LED</th>
</tr>
</thead>
<tbody>
<tr>
<td>Energy efficiency</td>
<td>Very low</td>
<td>Low</td>
<td>High</td>
<td>High</td>
<td>Very High</td>
</tr>
<tr>
<td>Luminous efficacy</td>
<td>14</td>
<td>24</td>
<td>60-100</td>
<td>65-110</td>
<td>80-140</td>
</tr>
<tr>
<td>(Lumen/Watt)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lifetime (hours)</td>
<td>1000</td>
<td>2000-1000</td>
<td>6000-10000</td>
<td>20000</td>
<td>50000</td>
</tr>
<tr>
<td>Heat</td>
<td>Yes+++</td>
<td>Yes+++</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Mercury</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
</tbody>
</table>

88 89
6.5. Conclusions
This is the first study comparing the crystalline and particle sizes and morphology with the respective photoluminescence emission intensity of two phosphor compositions prepared by five methods. \( \text{Y}_2\text{O}_3: \text{Eu}^{3+} \) and \( \text{LaPO}_4: \text{Ce}^{3+}, \text{Tb}^{3+} \) powders were prepared by combustion reaction, co-precipitation, hydrothermal, sol-gel, and spray pyrolysis synthesis methods. For \( \text{Y}_2\text{O}_3: \text{Eu}^{3+} \), the sol-gel method showed the highest PL emission intensity compared to other methods having a crystalline size of 26 nm and an average particle size of 2.19 \( \mu \text{m} \). The spray-pyrolysed powders have the lowest intensity with a 13 nm crystalline size and an average particle size of 0.56 \( \mu \text{m} \). For \( \text{LaPO}_4: \text{Ce}^{3+}, \text{Tb}^{3+} \), the co-precipitation method has the highest PL emission intensity with 33 nm crystalline size and an agglomerated morphology. The spray-pyrolysis method produces the lowest intensity with a crystalline size of 14 nm and a spherical and un-agglomerated morphology.

This study shows that a large crystalline size along with nearly-spherical and agglomerated particles tend to emit the highest PL intensity. The results show an increasing intensity as a function of increasing crystalline size, with the exception of combustion-synthesized \( \text{Y}_2\text{O}_3: \text{Eu}^{3+} \) particles and co-precipitated \( \text{LaPO}_4: \text{Ce}^{3+}, \text{Tb}^{3+} \) particles, which show high intensity with a relatively small crystalline size. The characteristic of producing high intensity with small crystalline size needs to be investigated further in detail. There was a slight increase in photoluminescence emission intensity with respect to particle size.

6.5.Acknowledgements
This work was supported by the U.S. Department of Energy Grant, DE-EE0002003. Chapter 5, in full, is a reprint of the material as it will appear in Materials Characterization. Swang-ho Lee, Joe I. Choi, Jinkyu Han, Youngjin Kim, Ian B. Talbot, and Joanna McKittrick. The dissertation author contributed the synthesis of the phosphors and characterization.

References

*Copy/pasted from prelim page

*No et al – list all authors, single space each entry, double space in between entries
Permission Letters

- Permission letters (cover letter from advisor/co-author letters) are required if you are using any of your own work in your dissertation or thesis that contains the following:
  - Published material
  - Material that has been submitted for publication
  - Material that is currently being prepared for submission for publication
  - Unpublished material that contains co-authors, even if there are no future plans to submit for publication
- This work must be acknowledged in your Acknowledgements section and at the end of each respective chapter
PERMISSION LETTER FROM YOUR ADVISOR (COVER LETTER)
MM/DD/YYYY

Laura Smith has my permission to include the following paper, of which I was a co-author, in her doctoral dissertation/master’s thesis.


~OR~

Laura Smith has my permission to include the following paper which was submitted for publication, of which I was a co-author, in her doctoral dissertation/master’s thesis.

Smith, Laura; Smith, Jane D.; White, Sigmund. “The Effect of Stress Distribution on Photoelasticity”.

~OR~

Laura Smith has my permission to include material, currently being prepared for submission for publication, of which I was a co-author, in her doctoral dissertation/master’s thesis.

Smith, Laura; Smith, Jane D.; White, Sigmund. “The Effect of Stress Distribution on Photoelasticity”.

~OR~

Laura Smith has my permission to include unpublished material coauthored with me in her doctoral dissertation/master’s thesis.

Smith, Laura; Smith, Jane D.; White, Sigmund. Chapter 6, Title.

[Signature]

Jane D. Smith

Typed stylized font signatures — not permitted
ProQuest – Publishing Options

- Will be published on ProQuest and UC eScholarship
- Publishing Options
  - Traditional (no charge) vs. Open Access
    - This option pertains specifically to how your dissertation/thesis is released in the ProQuest database. Your work will always be open access on eScholarship
  - Immediate release
  - Embargo: One year
  - Embargo: Two years
    - Mandatory for Biology, Biomedical Sciences, Sociology
  - MFA in Writing: 10 years
- Upload signed dissertation/thesis release form with ProQuest submission – match with publishing option
  - Your Advisor’s signature is required regardless of the publishing option
Final Submission on ProQuest

- The submission process is free of charge unless you select any of the following optional payment items during final submission:
  - Register copyright at the Library of Congress
    - ProQuest can only do this on your behalf if you are the sole author. If you have co-authors and want to register your copyright, you have to go through the Library of Congress directly on your own
    - You have copyright regardless, registering at the Library of Congress is just an extra level of protection
  - Select open access publishing for ProQuest (eScholarship is already open source)
  - Order personal copies

- Important!!!
  - Remember to submit your dissertation/thesis all the way through prior to your final document review time
  - Don’t worry, it’s not final until your paper is accepted so it won’t be published immediately after submission and ordered copies will not be printed at that point
Summary Timeline

- Make a preliminary appointment up to one month prior to your defense date. The final document review (check-in by email) will be discussed during your preliminary meeting.
- Work on dissertation or thesis draft so that it is formatted for your preliminary appointment.
- Collect co-author permission letters if necessary (*start early!*)
- Defend
- Upload and submit final version on ProQuest and work with your department and Graduate Division Advisor to submit all required paperwork.
**Note:** Please refer to the [Graduate Division website](https://grad.ucsd.edu) for the full [formatting manual](https://grad.ucsd.edu) and other details. The previous slides only provide a summary and contain information specific to Winter and Spring 2022.
We wish you great success in this final stage of completing your degree!