
FINAL EXAMINATION - ESSAY

Open-book. Three hours.

Write your exam number here: _____

All exam materials (including this booklet and your response) must be turned in at the end of the period. You will not receive credit unless you return this booklet with your exam number written above. Do not turn the page until instructed to begin.

General Notes and Instructions

1. Your goal is to show your mastery of the material presented in this course and your skills in analyzing legal problems.
2. Assume that today's date is May 6, 2015.
3. Unless expressly stated otherwise, assume that the facts recited herein occur within the United States, and references to rights, registration, applications, etc., are references to the same in the United States.
4. Unless otherwise explicitly stated, all references to patents and patent applications are of the utility kind (as opposed to plant or design) and nonprovisional in nature.
5. Unless directed otherwise, base your answer on the general state of the common law and typical statutory law in the United States, including all rules, procedures, and cases as presented in class, as well as, where appropriate, the theory and history discussed in class.
6. You may write anywhere on the examination materials – e.g., for use as scratch paper. But only answers and material recorded in the proper places will be graded.
7. During the exam: You may not consult with anyone – necessary communications with the proctors being the exception. You may not view, attempt to view, or use information obtained from viewing others' materials or responses.
8. You may not copy, transcribe, or distribute the material in this booklet or attempt to do the same.
9. After the exam: You may discuss the exam with anyone, except that you may not communicate regarding the exam with any enrolled member of the class who has not yet taken the exam, and you must take reasonable precautions to prevent disclosure of any information about the exam to the same.

Specific Notes and Instructions for PART TWO:

- a. This Part Two is worth approximately 2/3 of your exam grade.
- b. This Part Two of the exam is administered on an "open-book basis." You may use any notes and books you like. No electronic or interactive resources (such as a tablet computer, smart phone, etc.) may be used or referenced. You may, of course, use a laptop to write your exam, but you may not reference files stored thereon during the examination session. No materials may be shared during the exam.
- c. This exam will be graded anonymously. You may not waive anonymity. Do not write your name on any part of the exam response or identify yourself in any way, other than to use your examination I.D. number appropriately. Self-identification on the exam or afterward will, at a minimum, result in a lower grade, and may result in disciplinary action.
- d. Keep in mind the hypothetical setting for the exam facts, noted in general instructions above. In your written response, it is appropriate, if you wish, to note differences between minority and majority approaches in your answer, as well as statutory or other differences among jurisdictions.
- e. Note all issues you see. More difficult issues will require more analysis. Spend your time accordingly.
- f. Organization counts.
- g. Read all exam question subparts before answering any of them – that way you can be sure to put all of your material in the right place.
- h. Feel free to use abbreviations, but only if the meaning is entirely clear.
- i. **Bluebooks:** Make sure your handwriting is legible. I cannot grade what I cannot read. Skip lines and write on only on one side of the page. Please use a separate bluebook for each subpart.
- j. **Computers:** Please clearly label each subpart of your answer.
- k. All exam materials, including this booklet and your answer sheet, must be turned in at the conclusion of the period for taking this Part One.
- l. Good luck!

Knowing All the Crangles

IF YOU COUNT HIGH SCHOOL, and you should since he started his quest when taking general chemistry as a freshman, Jimarcus Jackson had spent the past 13 years trying to develop an ultra-fast rechargeable battery. Now, as a Ph.D. student at Ridgefield College of Technology, he was struggling to get somewhere with his dissertation research on electron-conducting polymers – a potentially promising way to store an electric charge.

Late on the night of February 13, 2015, when cooking up new batches of N-type polymers, Jimarcus used an Erlenmeyer flask he'd forgotten to wash. The flask was already contaminated with a substantial residue of cobalt(II) chloride hexahydrate when Jimarcus poured in the solution of pentathiophene polymer he had been working on. When the contents of the flask turned purple, Jimarcus understood his mistake. Exhausted, he decided to call it a night. He poured the ruined batch into a tray where it could dry overnight. That way he could scrape it off into the trash when he came back in the morning.

The next morning, as he was getting ready to tidy up, he was delighted to see the discarded solution from the previous night had dried to form a beautiful pattern of cracks that resembled the random-yet-rational layout of streets in a European city – all rendered in rich purple.

"It looks all crangelated," said Kelly Kyalwin, looking over his shoulder. Kelly was Jimarcus's fellow chemistry grad student, informal lab partner, and good friend.

"What does *crangelated* mean?" Jimarcus asked.

"Nothing. I mean, I just made it up. Um, *crazy angles* maybe? Doesn't it look crangelated?" Kelly hovered her fingers over the crackled forms. "I love the way it looks. Mmmm, I'd like a purse like that."

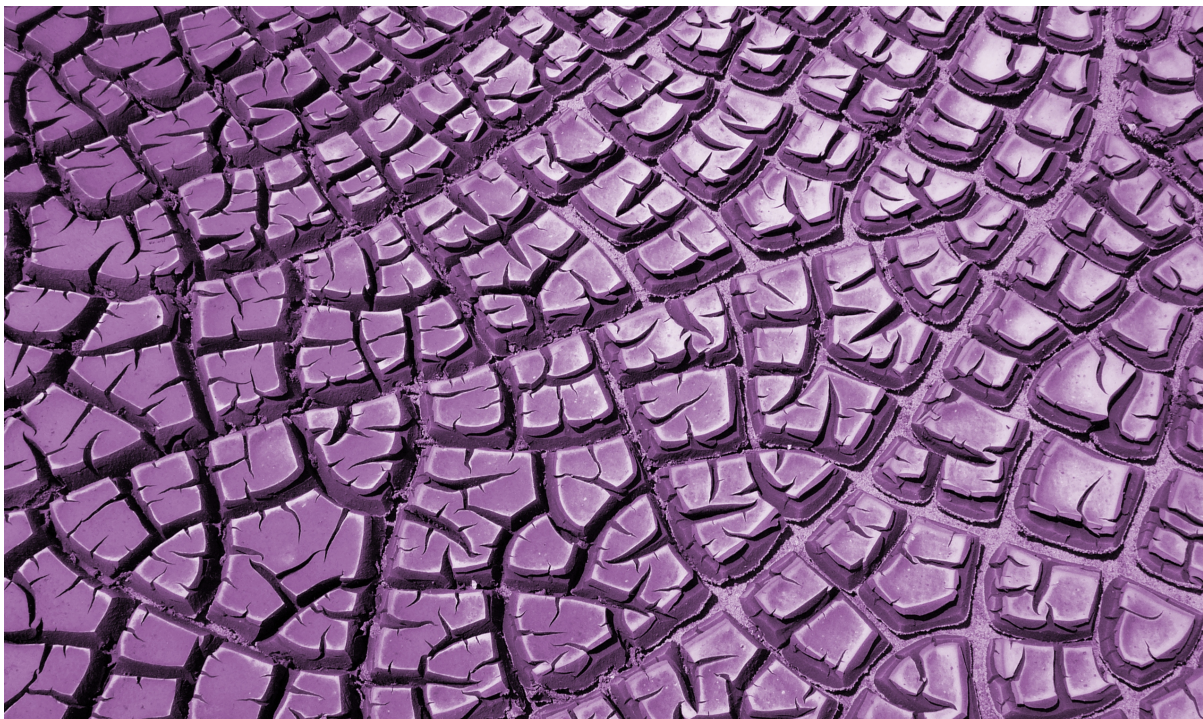


FIG. 1: The desiccated slurry of cobalt(II) chloride hexahydrate and pentathiophene polymer looks like an abstract view of the streets of London or some other European city.

“Go ahead, you can touch it,” Jimarcus said. “It’s not caustic. And making a purse from it is a great idea. The battery R&D business isn’t going so well for me.”

Kelly’s eyes lit up, and she started dialing her phone. “Jimarcus, you should do exactly that. I’m calling Lorelei right now!”

Lorelei Lliau was their mutual friend in Ridgefield’s masters in fashion design program. When she came over to the lab and saw the purple crangelated polymer, she instantly agreed with Kelly about its fashion potential.

Over mocha frappuchinos at the campus patio café, they hatched a plan to use the pattern to form a mold, from which they could make fabric-backed rubber panels of the crangelated form. They could then sew these into purses. The three of them would go into business together to create a new line of accessories: Crangle Handbags. Lorelei would handle the design part. Jimarcus would make the panels. Kelly would sew and line up meetings in New York through her brother’s fashion-industry contacts.

ONCE A FEW PURSES WERE MADE, everyone from the chemistry department wandered in and out of Jimarcus’s lab to look at them. Just about everyone agreed that the pattern was uniquely beautiful.

Soon it was time for Kelly and Lorelei to go off to New York to meet with buyers. They bought tickets and lined up meetings.

On April 27, 2015, the night before the trip, Jimarcus, Kelly, and Lorelei sat around in the chemistry lab on beanbag chairs drinking some beers to celebrate their having gotten to this point.

“So, Jimarcus,” Lorelei said, “why is it that this material – now, what is it? Cobalt(II) chloride hexahydrate with pentathiophene polymer?”

“Yeah,” Jimarcus said. “But I’m calling it cobapentamer for short in my lab notebooks.”

“Okay,” Lorelei started again. “Why is it that cobapentamer doesn’t make for a good battery? Is it not fast enough at transmitting electrons or something?”

“Oh, no, actually the problem is that it’s too fast. It’s like a superhighway for electrons. It won’t hold on to them. They just slip away from it.”

“Mmmm, superhighway.” Lorelei repeated. “Okay.”

“Wait, that’s it!” Jimarcus jumped up. “The cobapentamer is like a superhighway, and with the pattern it’s created – like the streets in a city that allow you to get anywhere – it could allow ultrafast transmission of electric charge throughout an electrode substrate! A CRANGLEATED BATTERY!”

As Kelly and Lorelei looked on, they watched Jimarcus start running around the tubes and flasks and bunsen burners in a whirr of activity. “I could create a reverse

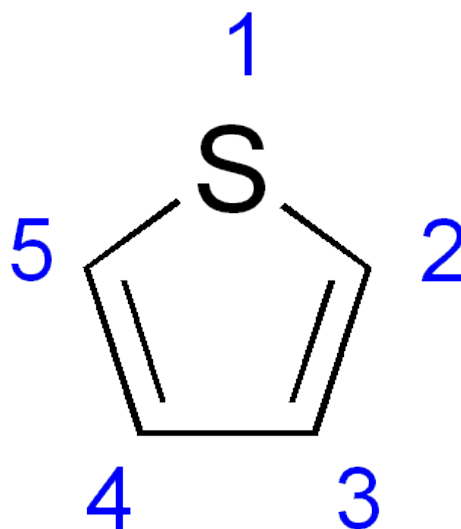


FIG. 2: Pentathiophene is one of several possible oligomers of thiophene. Pentathiophene – with “penta” meaning “five” thiophene units. Other thiophenes would include tetrathiophene (having four thiophene units, with “tetra” meaning four), trithiophene (having three thiophene units, with “tri” meaning three), and dithiophene (having two thiophene units, with “di” meaning two). You get the idea.

matrix of cobapentamer and build around it some more conventional material for storing electric charge – lithium-ion or rubidium-ion, for example – then we can get the battery to take on charge much, much faster!”

Within 10 hours, as the sun was rising, Jimarcus had his first working prototype, which he sized to fit in Kelly’s cell phone.

Meanwhile, Kelly, who had some computer programming abilities, was able to write an app for her Android-based phone to control the battery. She even worked

up a cool-looking icon to show when the battery was at maximum charge. Kelly had drained her phone of all power in order to test it.

Loralei walked up saying, “Let’s see if it works.”

“No!!” Kelly yelped. “I haven’t bug-checked the code yet!”

Loralei yanked the plug out as soon as she had put it in.

“No harm done,” Loralei said. “I pulled it back out immediately. Calm down guys! You look catatonic.”

But Kelly and Jimarcus weren’t upset at Loralei. They were looking at the phone in disbelief: There was Kelly’s icon.

“It’s 100% charged,” Kelly whispered. “That was very, very, very fast.”

THE THREE OF THEM WERE WILDLY EXCITED, but Kelly and Loralei needed to make their flight. And Jimarcus had a long to-do list



FIG. 3: The battery icon Kelly designed (indicating full charge). She used a doodling style that has been identified as one of the top graphic design trends of 2015.

himself. So he drove his friends to the airport and wished them good luck. And he told them to be careful not to lose Kelly's phone: It was now worth a fortune.

Getting back to the lab, Jimarcus started doing some background research on what he'd created. He was upset to find a patent that seemed to cover the crangelated battery. Patent '909 was issued on April 28, 2015 from an application filed on March 29, 2014. The specification said nothing about batteries. Instead, it discussed protein aggregate imaging. What concerned Jimarcus was the following:

I claim:

1. Pentathiophene polymer.
2. A substance comprising pentathiophene polymer mixed into a slurry with any hydrate.
3. A substance according to claim 2 where in the hydrate is chloral hydrate.

The crangelated battery design wouldn't work without pentathiophene polymer. Jimarcus wondered if the '909 patent meant the commercial potential of his battery was zilch.

Digging deeper, he found a 1982 article in a chemistry journal that included the following:

Thiophene polymers offer considerable promise for imaging protein aggregates – although their configurations strongly suggest they will not prove useful in any other capacity. Our study used dithiophene polymers, but by adding additional thiophene units, other related polymers could be created. And beneficial reactions may be encouraged by using slurries combining thiophene polymers with various hydrates.

Discouraged by his research and exhausted from days without any sleep to speak of, Jimarcus decided to get some rest and start fresh the next day.

IN NEW YORK, Kelly and Lorelei went on a whirlwind of meetings. Many buyers were fascinated by the Crangle bags and indicated serious interest.

In between meetings, Lorelei showed the Crangle bags to fashion conscious people on the street, and Kelly videoed their reactions with her phone. People were oohing and aahing over the purses. It was great stuff, and Kelly kept sending the videos back to Jimarcus.

Kelly and Lorelei were midway through their second day of meetings when they got a call for one of the first buyers they met with, Braden Babecki. He put in an order! Crangle Handbags would soon be offered for sale in one of New York's chicest boutiques, with a price tag of about \$1,800 a bag! Crangle Handbags was officially a thing!

Braden did, however, have a couple of things he wanted Jimarcus, Kelly, and Lorelei to do before they got to work producing the units he'd ordered. First, Braden was concerned that Crangle might not be the best name for the handbag line, since there is a line of handbags from the United Kingdom called Kangol. Because of that, he thought it was worthwhile for them to meet with a lawyer to get an opinion about

whether that posed a problem. Second, he wanted Jimarcus, Kelly and Lorelei to come up with some kind of video to post online about the bags to stir up interest.

Jimarcus was elated to get the news, and he got to work right away on making a buzz-generating video. He shot some footage of the purses inside the chemistry lab – though he was careful not to show anything in the lab that might tip off a viewer on how to make the cobapentamer or the battery. (Not that Jimarcus was very worried about it – he had the essential aspects of both, which he had shared with no one, kept in an encrypted computer file.)

He combined his in-the-lab footage with footage from four other sources. First, of course, he used the video that Kelly shot of people on the streets in New York reacting to the Crangle handbags. Next, he included 10 clips of less than two seconds each of film footage of mudcracks taken by the U.S. Department of the Interior. Those clips came from a 26-minute film about droughts in Western states, and they were useful because the mudcracks played nicely with the purse patterns as a visual. Then he included eight clips of less than three seconds each from *Smilin' Through*, a 96-minute silent film produced by the Norma Talmadge Film Corporation and released by First National Pictures in 1922.

Finally, he included four clips for a total of 23 seconds from a six-minute interview with überfamous designer Jason Wang. The interview was produced by Jason Wang and posted online by his company to promote his clothing and accessory lines. In the video, Jason Wang discussed his design philosophy. In the portions used by Jimarcus, Jason Wang explained how fashion can never be created by scientists in a lab, because fashion is about the essence of humanity, while science, though useful, is about people trying to deny or escape their humanity. As the Jason Wang footage was used – juxtaposed with shots of the strikingly chic Crangle handbag – it highlighted the silliness and arrogance of the comments.

PLEASED WITH A SUPER-SUCCESSFUL TRIP TO NEW YORK, Kelly and Lorelei celebrated in an airport bar as they waited to board their plane. After they boarded and were



FIG. 4: Kangol is a British clothing and accessories maker. The bag shown here – typical for Kangol – retails for £20 (about \$30).

getting settled in their seats, the flight attendant asked all passengers to put their phones in airplane mode. That's when Kelly realized she didn't have hers. She had left it in the airport bar.

Back at the airport bar, the phone was pocketed by Martin Miluha, the bartender – or *mixologist*, as he preferred to be called. He knew the phone was Kelly's. And he knew how to get in touch with Kelly and Lorelei – he had struck up a conversation with them and they'd given him a business card. And Martin even knew that under state law he was required to return any lost property worth more than \$20 to the owner or else turn it over to the police. And yet he didn't. He'd overheard Kelly and Lorelei talking about some kind of radical new battery technology in the phone. And that told him there was some money to be made. So he called up someone he'd met at the bar in the preceding week: Natalie Nikau, a former high school science teacher who was now working as an "information broker."

Natalie paid Martin \$10,000 for the phone, and she, in turn, sold it for half a million dollars to Hexetron Halide, a company working on advanced battery technologies.

Jimarcus, Kelly, and Lorelei were able to figure out most of this out based on what they saw on television yesterday. An executive from Hexetron Halide announced on CNBC, the financial-news cable television channel, that the company had been able to reverse engineer a radical new fast-charging battery technology, and they would be bringing products to market based on the technology within months.

Being interviewed in the CNBC studios, the executive showed off a phone. It wasn't Kelly's phone, but it was clear they'd had access to Kelly's phone: The Hexetron executive plugged in and immediately unplugged the charger cord. Then he held up the phone for the camera. There was Kelly's doodle-design battery icon indicating a full charge.

"Ugh! And I even left a copy of the source code for the battery manager app unencrypted on my phone!" Kelly said, exasperated.

At least there was the handbag line. But then they saw the text from Braden. He warned them that some Crangle handbag knockoffs were going to hit the market soon – maybe even sooner than the Crangle originals, if they didn't get some units to him right away.

The friends knew they would have to put their legal ducks in a row. They were in the big time now. First, they all retained independent counsel and hammered out a business partnership, with equitable shares based on their relative contributions. With everything now in a single entity ("JKL LLP") they could approach any problems as a unified front. It was now time to understand all the intellectual property angles.

That's when they called you.

QUESTION

Analyze the parties' legal positions and explain how you would advise Jimarcus, Kelly, and Lorelei.

What do they have that is or could be protected by intellectual property law? What steps should they take – if any – to get the full benefit of what the law will allow them?

One thing in particular they want to know is whether copyright protects the original crangelated pattern. They are also keen to know if they face any potential liability.

Organize your response as follows, clearly labeling the subparts:

Subpart A: Discuss any issues concerning copyright and, if applicable, moral rights.

Subpart B: Discuss any issues concerning patents and trade secrets, and, if applicable, any sui generis rights or other forms of IP protection for inventions, industrial designs, or the like.

Subpart C: Discuss any issues concerning trademark (including trade dress, unfair competition, and related doctrines).

Subpart D: If there is anything else you wish to discuss, which does not belong in any of subparts A through C, please put it under this Subpart D.

A few things to keep in mind: The subparts will not all be given equal weight. The subpart structure is provided for organizational purposes only. Pace yourself appropriately, and plan ahead to put information where it belongs.

Also, avoid needless repetition. Do not repeat the exact same analysis with substituted parties. Computer users should generally avoid the cut-and-paste function. You may incorporate analysis by reference to another portion of your exam answer to the extent appropriate.

Some suggested abbreviations for your answer:

Braden Babecki	BB
Cobalt(II) chloride hexahydrate with pentathiophene polymer or “cobapentamer”	CP
Hexetron Halide	HH
JKL LLP	JKL
Jimarcus Jackson	JJ
Kelly Kyalwin	KK
Lorelei Lliau	LL
Martin Miluha	MM
Natalie Nikau	NN

CREDITS

Note: These credits are not part of the hypothetical facts for the exam. Fig. 1, altered version of photo “Desiccation-cracks hg” by Hannes Grobe (Hgrobe), © 2007 Hannes Grobe, <https://commons.wikimedia.org/wiki/User:Hgrobe>, licensed under a Creative Commons Attribution-ShareAlike 2.5 License, available at <http://creativecommons.org/licenses/by-sa/2.5/>. Fig. 2 by Jirí Janoušek. Fig. 3 created from the illustration “Ejemplo de garabato digitalizado” by Gerardo Verdugo, © 2013 Gerardo Verdugo, <https://commons.wikimedia.org/wiki/User:Gerardo.verdugov>, licensed under a Creative Commons Attribution-Share Alike 3.0 Unported license, available at <https://creativecommons.org/licenses/by-sa/3.0/deed.en>. Fig. 4 is a photo of a real Kangol purse; Kangol /Debenhams/Polyvore.