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USC Webinar series: Hot topics in the USPTO

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Acting Regional Director, Western Regional Office

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Types of intellectual property

Patent

New, inventive ideas

Trademark

Identifies the origin of goods or services

HOLLISTER

Copyright

Creative expression stored in a tangible form

Trade secret

Any information that is valuable & kept confidential

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Trade secrets

Trade secret basics:

- Protects commercially valuable proprietary information, e.g., formulas or business information that gives a competitive advantage
- Trade secrets are not generally known and must be subject to reasonable efforts to preserve confidentiality

Common ways to lose a trade secret:

- Failure to take adequate steps to prevent disclosure
- Owner or owner-authorized disclosure
- Reverse engineering
- Independent development

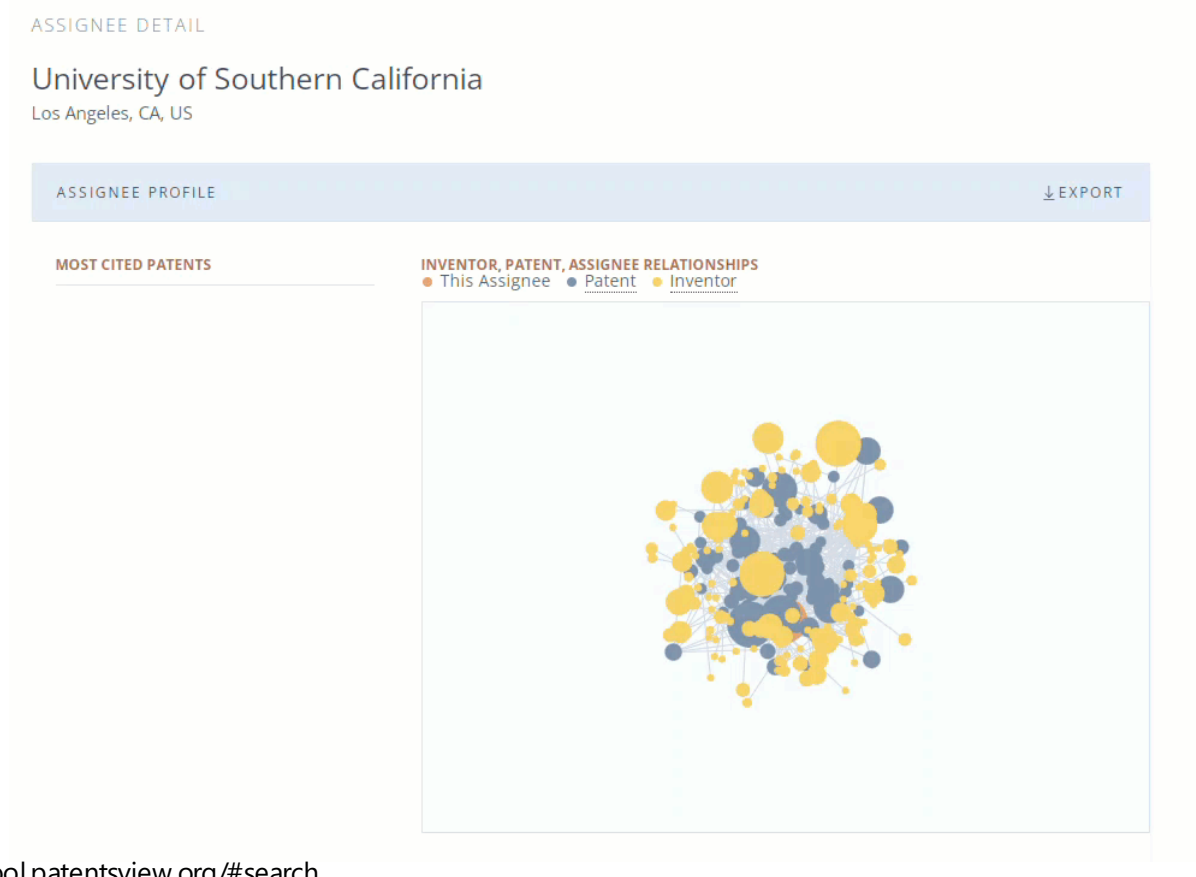
What are the risks of disclosure?

- What can I say before filing?
- When do I know I've said too much?
- Disclosure vs. sale
  (e.g., Crowdfunding campaigns)
- Can't I just keep it secret?

Examples of public disclosure:

- displaying your invention at a trade show
- posting your invention on the internet
- offering to sell your invention
- a description of your invention in a newspaper or journal article
- publicly demonstrating your invention

USC most cited patents



Source: https://datatool.patentsview.org/#search

USC-assigned most cited patent

(12) **United States Patent**
Thompson et al.

(10) **Patent No.: US 6,303,238 B1**
(45) **Date of Patent: Oct. 16, 2001**

(54) **OLEDS DOPED WITH PHOSPHORESCENT COMPOUNDS**

(75) Inventors: **Mark E. Thompson**, Anaheim; **Yujian You**; **Andrei Shoustikov**, both of Los Angeles, all of CA (US); **Scott Sibley**, Baltimore, MD (US); **Paul E. Burrows**, Princeton Junction; **Stephen R. Forrest**, Princeton, both of NJ (US)

(73) Assignees: **The Trustees of Princeton University**, Princeton, NJ (US); **The University of Southern California**, Los Angeles, CA (US)

(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.

(21) Appl. No.: **08/980,986**

(22) Filed: **Dec. 1, 1997**

(51) **Int. Cl.**[7] **H05B 33/14**

(52) **U.S. Cl.** **428/690**; 428/917; 313/504; 313/506; 427/66; 252/301.16

(58) **Field of Search** 428/917, 690, 428/691; 313/504, 506, 503; 427/66; 252/301.16

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Primary Examiner—Marie Yamnitzky
(74) *Attorney, Agent, or Firm*—Kenyon & Kenyon

(57) **ABSTRACT**

Organic light emitting devices are disclosed which are comprised of a heterostructure for producing electroluminescence wherein the heterostructure is comprised of an emissive layer containing a phosphorescent dopant compound. For example, the phosphorescent dopant compound may be comprised of platinum octaethylporphine (PtOEP), which is a compound having the chemical structure with the formula:

(List continued on next page.)

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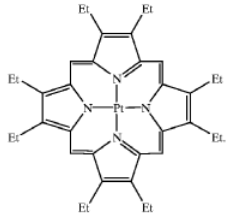

63 Claims, 3 Drawing Sheets

Recently granted patent assigned to USC

(12) **United States Patent**
Yang et al.

(10) **Patent No.: US 11,245,111 B2**
(45) **Date of Patent: Feb. 8, 2022**

(54) **STABLE POSITIVE SIDE MATERIAL FOR ALL-ORGANIC FLOW BATTERY**

(71) Applicant: **UNIVERSITY OF SOUTHERN CALIFORNIA**, Los Angeles, CA (US)

(72) Inventors: **Bo Yang**, Los Angeles, CA (US); **G. K. Surya Prakash**, Hacienda Heights, CA (US); **Robert Aniszfeld**, Los Angeles, CA (US); **Sri R. Narayan**, Arcadia, CA (US); **Lena Hoober-Burkhardt**, Los Angeles, CA (US); **Sankarganesh Krishnamoorthy**, Los Angeles, CA (US); **Advaith Murali**, Los Angeles, CA (US); **Archith Nirmalchandar**, Los Angeles, CA (US)

(73) Assignee: **University of Southern California**, Los Angeles, CA (US)

(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 124 days.

(21) Appl. No.: **16/161,647**

(22) Filed: **Oct. 16, 2018**

(65) **Prior Publication Data**

US 2019/0115594 A1 Apr. 18, 2019

Related U.S. Application Data

(60) Provisional application No. 62/573,292, filed on Oct. 17, 2017.

(51) **Int. Cl.**

H01M 4/36	(2006.01)
H01M 8/18	(2006.01)
H01M 4/60	(2006.01)
H01M 8/08	(2016.01)
C07C 309/44	(2006.01)
C07C 309/42	(2006.01)
C07C 309/43	(2006.01)

(Continued)

(52) **U.S. Cl.**

CPC ***H01M 4/368*** (2013.01); ***C07C 303/08*** (2013.01); ***H01M 4/60*** (2013.01); ***H01M 8/08*** (2013.01); ***H01M 8/188*** (2013.01); *C07C 309/42* (2013.01); *C07C 309/43* (2013.01); *C07C 309/44* (2013.01); *C07C 2603/24* (2017.05); *C07C 2603/50* (2017.05); *H01M 2004/028* (2013.01); *H01M 2008/1095* (2013.01); *H01M 2300/0002* (2013.01); *H01M 2300/0082* (2013.01)

(58) **Field of Classification Search**

CPC H01M 4/60; H01M 4/36; H01M 4/368; H01M 8/18; H01M 8/188; H01M 8/08; C07C 309/42; C07C 309/43; C07C 309/44

See application file for complete search history.

(56) **References Cited**

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2015/0243991	A1 *	8/2015	Huskinson	H01M 4/60 429/72

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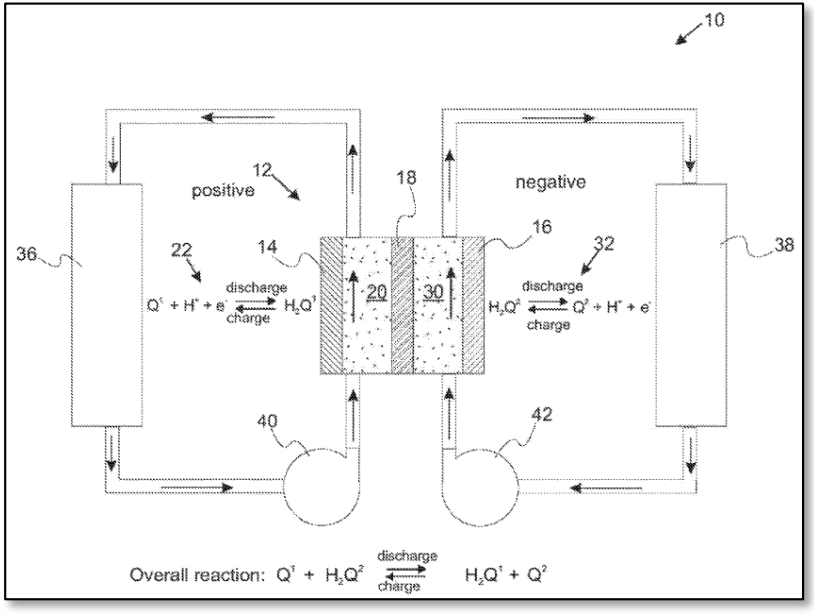
Primary Examiner — Karie O'Neill Apicella
(74) *Attorney, Agent, or Firm* — Brooks Kushman P.C.

(57) **ABSTRACT**

A quinone derivative with a high redox potential that does not undergo Michael addition or proto-desulfonation. This molecule addresses the key issues faced with the positive side material of an aqueous all-organic flow battery. This new molecule is 2,5-dihydroxy-4,6-dimethylbenzene-1,3-disulfonic acid (or the disulfonate salt thereof). This quinone derivative offers good solubility, electrochemical reversibility, and robustness to charge/discharge cycling. Quinones with reduced crossover are also provided.

15 Claims, 9 Drawing Sheets



USC assigned patent

(12) **United States Patent**
Humayun et al.

(10) **Patent No.: US 9,089,600 B2**
(45) **Date of Patent: Jul. 28, 2015**

(54) **SYSTEMS AND METHODS FOR IN VITRO AND IN VIVO IMAGING OF CELLS ON A SUBSTRATE**

(75) Inventors: **Mark Humayun**, Glendale, CA (US); **Ashish Ahuja**, New York, NY (US); **Charles Le Pere**, Long Beach, CA (US)

(73) Assignees: **University of Southern California**, Los Angeles, CA (US); **Doheny Eye Institute**, Los Angeles, CA (US)

(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 84 days.

(21) Appl. No.: **14/114,193**

(22) PCT Filed: **Apr. 27, 2012**

(86) PCT No.: **PCT/US2012/035671**
§ 371 (c)(1),
(2), (4) Date: **Oct. 25, 2013**

(87) PCT Pub. No.: **WO2012/149480**
PCT Pub. Date: **Nov. 1, 2012**

(65) **Prior Publication Data**

US 2014/0050386 A1 Feb. 20, 2014

Related U.S. Application Data

(60) Provisional application No. 61/481,107, filed on Apr. 29, 2011.

(51) **Int. Cl.**

G06K 9/00	(2006.01)
A61K 49/00	(2006.01)
A61L 27/38	(2006.01)
A61F 9/00	(2006.01)

(52) **U.S. Cl.**
CPC ***A61K 49/0017*** (2013.01); ***A61L 27/38*** (2013.01); ***A61L 27/3834*** (2013.01); *A61F 9/00* (2013.01)

(58) **Field of Classification Search**
CPC G06K 7/10732; G06K 7/10554; G06K 7/10594
See application file for complete search history.

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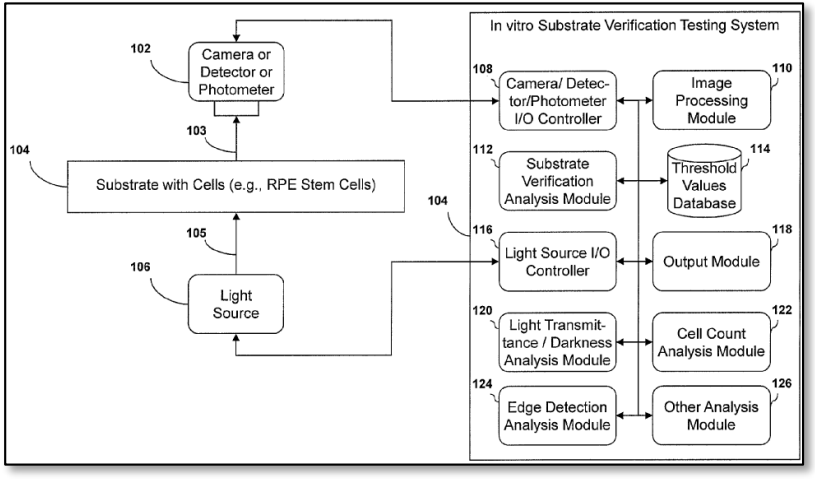
International Search Report and Written Opinion for PCT/US2012/035671, dated Nov. 23, 2012.
International Preliminary Report on Patentability for PCT/US2012/035671, dated Oct. 29, 2013.

Primary Examiner — Stephen R Koziol
Assistant Examiner — Amandeep Saini
(74) *Attorney, Agent, or Firm* — Knobbe, Martens, Olson & Bear, LLP

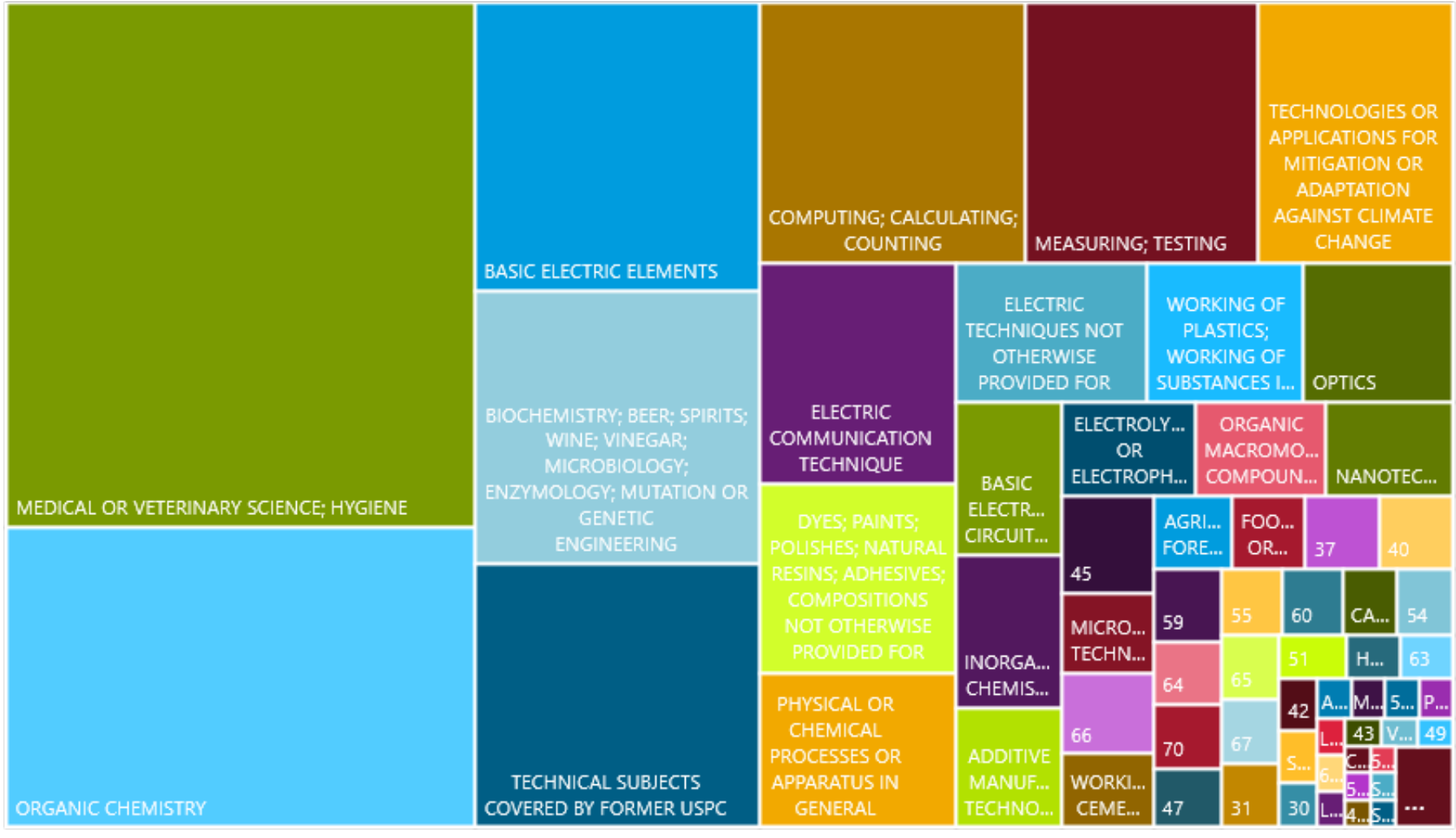
(57) **ABSTRACT**

Disclosed herein are generally to methods and systems that facilitate imaging of cells on a substrate and more particularly to pre-implantation (in vitro) and post-implantation (in vivo) imaging of cell-seeded substrates implanted in target tissues in the context of stem cell therapy.

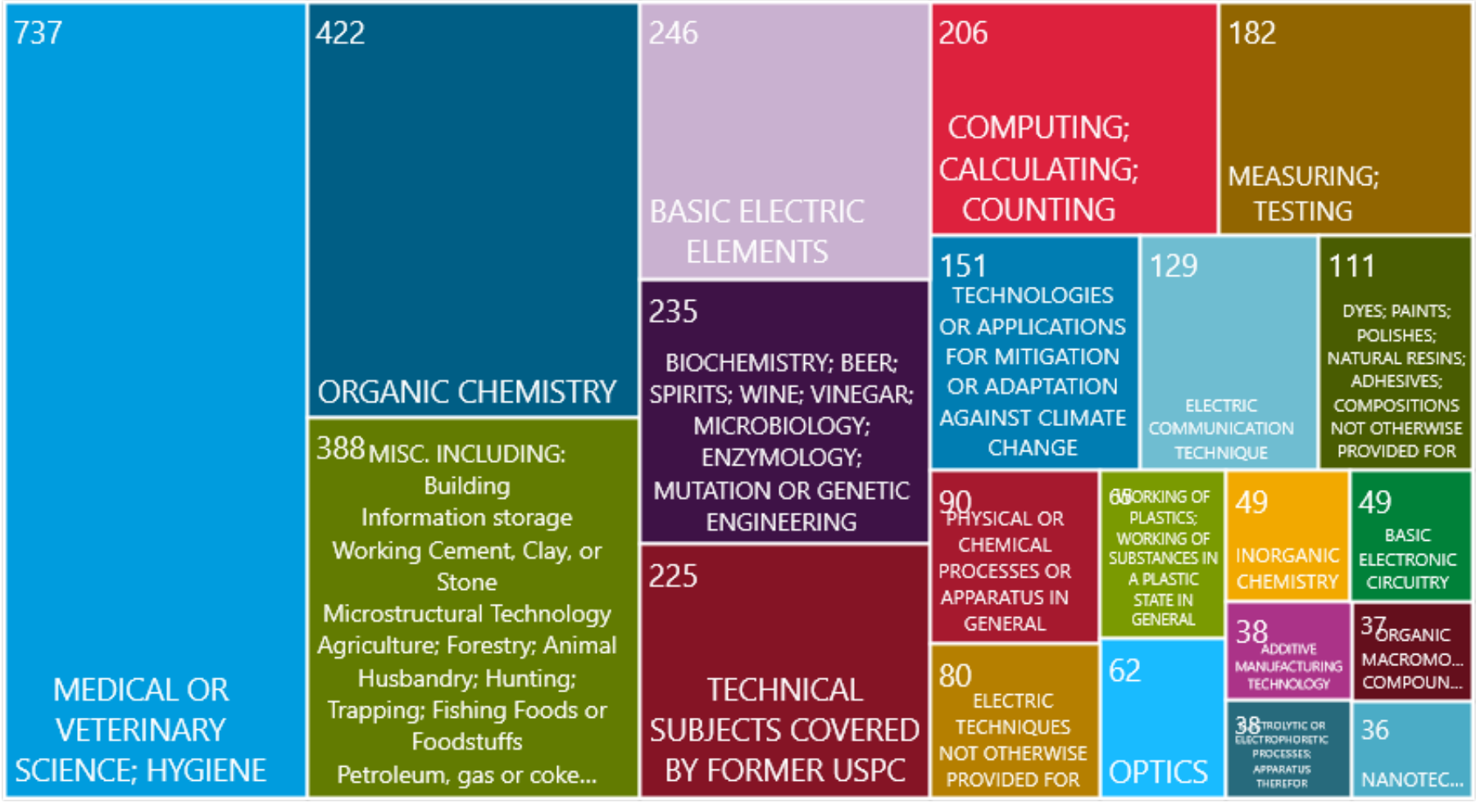
16 Claims, 22 Drawing Sheets



USC Assigned Patents by technology classification (3576 Patents Granted)



USC Assigned Patents by technology classification (3576 Patents Granted)



USC trademark examples

KRYSTALBOND 97055892	Go Beyond 97206265	PLUROCART 90838408
MANY DISCIPLINES. ONE INTEGRATED CURRICULUM. INFINITE POSSIBILITIES. 90761977	Many Disciplines. One Integrated Program. Infinite Possibilities. 90760966	BLVD STUDIOS 90301696
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REIMAGINING MEDICINE, TRANSFORMING LIVES. 88896325	88266120 	 88907951

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- Cofounded in 1973 by USPTO
- Nonprofit based in North Canton, OH
- $34 million in revenues
- 160 employees
- 2000 philanthropic partners

NIHF| Partnership Agreement

- **$6 million joint agreement**
  - USPTO's largest outreach partnership
  - USPTO provides $4 million cash & in-kind
  - NIHF must match funds
- **Recognition Programs**
  - Annual induction in May
  - Museum in HQ
- **STEM & IP education programs**
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  - 180,000 children annually
  - 22,000 teachers trained annually
- **Collegiate Inventors Competition**
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  - Ceremony at USPTO HQ

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- Must hold **U.S. Patent** and significantly contribute to nation's welfare
- **Over 600 inductees**
- Induction held annually in May in **Washington, DC**
- Featured in **NIHF Museum**
- **Integrated** into all aspects of program offerings

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Camp Invention
K-6th Grade

Invention Project K-6
K-6th Grade

Club Invention
1st-6th Grade

STEM Maker Lab
1st-6th Grade

Innovation Exploration Kits
K-9th Grade

Invention Project 6-9
6th-9th Grade

Leaders-in-Training
7th-9th Grade

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Collegiate Inventors Competition
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NIHF| Collegiate Inventors Competition

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- Any **part-** or **full-time undergrad or graduate student** enrolled in U.S. college or university
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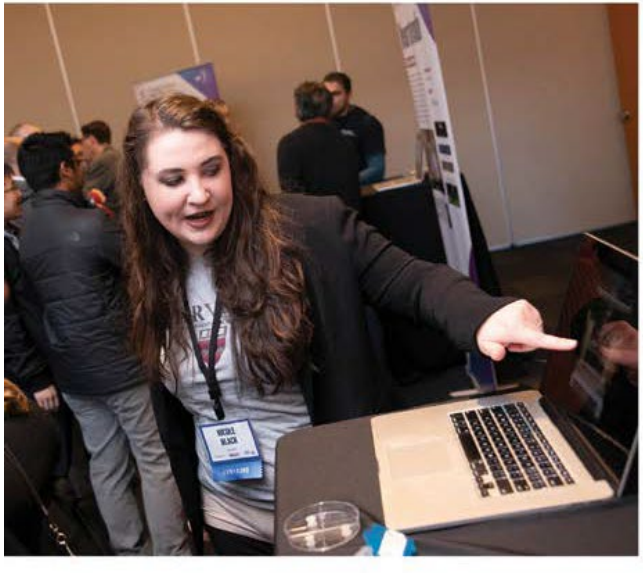
–Lia W., 2019 Finalist

NIHF| Collegiate Inventors Competition

CIC Finalists receiving feedback from NIHF Inductee Victor Lawrence, Inventor of Signal Processing in Telecommunications.



"Our world is constantly changing and progressing, and in order to keep up with all of the different demands and changes in our society, we need to change the way we use products, interact with people, interact with our environment, and solve our health problems.

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Nicole Black, Harvard University
2018 CIC Finalist

Qualifications

Becoming a patent examiner

Employment requirements

- U.S. citizen or U.S. National
- Bachelor's degree or combination of education and experience
- Relocate to Washington, D.C. metro area/or a regional office

Apply at: USPTO.usajobs.gov/

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Patent examiner skill set

- Strong technical background
- Analytical and research oriented
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- Ability to independently manage time
- Ability to make decisions
- Strong attention to detail
- Professional and collegial
- Flexible and adaptive
- Self-motivated

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