Finding Articles

Finding Patents

Finding Standards

Finding Articles

What do you have access to as a Columbia student?

- Article databases and indexes – full text content, citations and abstracts
- Columbia's licensed e-journal collections
- Columbia's print journal collections
  - Offsite collections @ ReCap
- If we don't own it- ILL

Databases

- **Engineering Village 2-** Search Compendex, INSPEC and the Referex handbook collection simultaneously.
  - Compendex- Citations and abstracts for articles in engineering and technology periodicals, conference papers and reports.
  - INSPEC- Covers journal articles and conference proceedings in physics, astronomy, electrical & electronics engineering, computer sciences.
  - Referex – Engineering reference collection. Handbooks, monographs

- **Web of Science**
  - Web of Science consists of seven databases containing information gathered from thousands of scholarly journals, books, book series, reports, conferences, and more
  - Has content dating back to 1900

CLIO / Lweb

- Columbia Library Information Online – http://library.columbia.edu
  - Search our catalog (print and e-resources)
  - Search for databases
  - Article search – results include things we may not own. Try ILL for these items
  - Academic Commons – Columbia's institutional repository
  - E-journals and e-books (collections and individual titles)
  - Lweb (all of CU Libraries websites content)

Lweb

- http://library.columbia.edu/locations/engineering.html
  - Subject centered collection of resources
    - Broken down by department, subject, type of resource, sometimes even by individual class study guides
    - Includes subject guides for:
      - Applied Physics & Applied Mathematics
      - Biomedical Engineering
      - Chemical Engineering
      - Civil Engineering
      - Computer Science
      - Earth & Environmental Engineering
      - Electrical Engineering
      - Industrial Engineering & Operations Research
      - Mechanical Engineering

Lweb

- Resource type
  - Guides to searching
    - Journals
    - Databases
    - Patents
    - Standards
    - Technical reports
    - Handbooks and reference works
    - Funding

Questions?

Finding Patents

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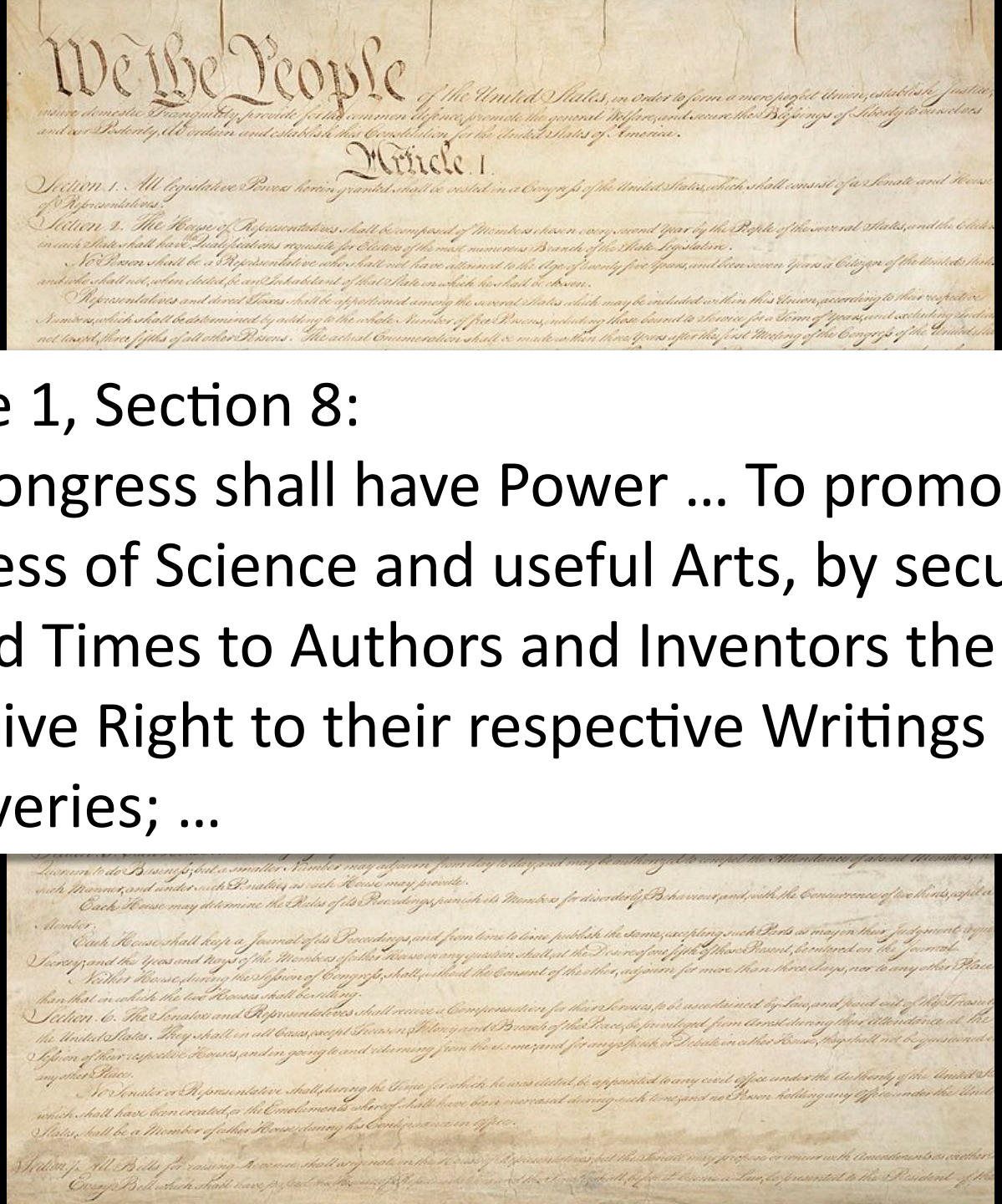

Article 1, Section 8:

The Congress shall have Power … To promote the Progress of Science and useful Arts, by securing for limited Times to Authors and Inventors the exclusive Right to their respective Writings and Discoveries; …

Prior Art

NON-PATENT CITATIONS

	Reference
1	Antoni et al., "Pushing the limits for Thiol-Ene and CuAAC Reactions: Synthesis of a 6th Generation Dendrimer in a single day," Macromolecules 2010, 43, 6625-6631.
2	Dondoni, "The Emergence of Thiol-Ene Coupling as a Click Process for MAterials and Bioorganic Chemistry," A. Angew. Chem. Int. Ed. 2008, 47, 8995-8997.
3	Fleming et al., "Triazole Cycloaddition as a General Route for Functionalization of AU Nanoparticles," Chem. Mater., vol. 18, 2006, pp. 2327-2334.
4	Himo et al., "Copper(I)-Catalyzed synthesis of azoles. DFT study predicts unprecedented reactivity and intermediates,"J. Am. Chem. Soc., vol. 127, 2005, pp. 210-216.
5	Huisgen, "Kinetics and Mechanism of 1,3-Dipolar Cycloadditions," Angew. Chem. Int. Ed., vol. 2, No. 11, 1963, pp. 633-645.
6	Kolb et al, "Click Chemistry: Diverse Chemical Function from a Few Good Reactions," Angew. Chem. Int. Ed. 2001, 40, 2005-2021.
7	Lancaster et al., "Photopatterned "Click" Functional Polymer Surfaces," Polymer Preprints 2010, 51(1), 66-67.
8	Lewis et al., "Click Chemistry in Situ: Acetylcholinesterase as a reaction vessel for the selective assembly of a femtomolar inhibitor from an array of building blocks," Angew. Chem. Int. Ed., vol. 41, No. 6, 2002, pp. 1053-1057.
9	Li et al., "Functionalization of Single-walled Carbon nanotubes with well-defined polystyrene by "click" coupling," J. Am. Chem. Soc., vol. 127, 2005, pp. 14518-14524.
10	Moses, J. E. and Moorhouse, A. D., 'The Growing Applications of Click Chemistry, Chem. Soc. Rev 2007, 1249-1262.
11	Noodleman et al., "Quantium Chemical Studies of Intermediates and Reaction pathways in selected enzymes and catalytic synthetic systems," Chem. Rev., vol. 104, 2004, pp. 459-508.
12	Punna et al., "Head-to-tail Peptide cyclodimerization by copper-catalyzed azide-alkyne cycloaddition," Angew. Chem. Int. Ed., vol. 44, 2005, pp. 2215-2220.
13	Rodionov et al., Mechanism of the ligand-free Cu1-catalyzed Azide-Alkyne Cycloaddition Reaction,' Angew. Chem. Int. Ed., vol. 44, 2005, pp. 2210-2215.
14	Rostovtsev,V. V., Green, L. G., Fokin, V. V., Sharpless, K. B., "A Stepwise Huisgen cycloaddition process: Copper(I)-Catalyzed regioselective "Ligation" of Azides and terminal Alkynes," Angew. Chem. Int. Ed. 2002, 41, 2596-2599.
15	Sun et al., "Carbohydrate and Protein Immobilization onto Solid Surfaces by Sequential Diels-Alder and Azide-Alkyne Cycloadditions," Bioconjug Chem., vol. 17, pp. 52-57 (2006).
16 *	Tartaglino et al . Photobinding of [gamma-(32)P] ATP gamma-benzophenone to the surface of a polyurethane membrane in the preparation of a beta-particle-emitting balloon catheter. J Biomed Mater Res. 1999;48(5):669-74.
17	Tornoe, C. W., Christensen, C., Meldal, M., "Peptidotriazoles on Solid Phase: [1,2,3]—Triazoles by Regiospecific Copper(I)-Catalyzed 1,3- Dipolar Cycloadditions of Terminal Alkynes to Azides," J. Org. Chem. 2002, 67, 3057-3064.
18 *	Zhao et al. Synthesis and characterization of a polymerizable benzophenone derivative and its application in styrenic polymers as UV-stabilizer Original Research Article. European Polymer Journal, vol. 43, Issue 10, Oct. 2007, pp. 4541-4551.

* Cited by examiner

CLASSIFICATIONS

U.S. Classification	522/39, 522/49, 522/63, 522/33, 522/59, 522/34, 522/46, 522/50, 522/35
International Classification	C08F2/46, C08F2/50, C08F2/42

See if you can find a patent from before you were born for that arm thing that keeps a door open.

USPTO:
United States Patent & Trademark Office

EPO:
European Patent Office

WIPO:
World Intellectual Property Organization

Google Patents

Espacenet:
European Patent Office

Derwent Innovations Index

Classification Codes

A – Polymers and Plastics
B – Pharmaceuticals
C – Agricultural Chemicals
D – Food, Detergents, Water Treatment and Biotechnology
E – General Chemicals
F – Textiles and Paper-Making
G – Printing, Coating, Photographic
H – Petroleum
J – Chemical Engineering
K – Nucleonics, Explosives and Protection
L – Refractories, Ceramics, Cement and Electro(in)organics
M – Metallurgy
N – Catalysts

Classification Codes

P – General
P1 – Agriculture, Food, Tobacco (A01 excluding N, A24)
P2 – Personal, Domestic (A41-A47)
P3 – Health, Amusement (A61-A63, excluding A61K)
P4 – Separating, Mixing (B02-B09)
P5 – Shaping Metal (B21-B23)
P6 – Shaping Non-metal (B24-B28)
P7 – Pressing, Printing (B30- B32, B41-B44)
P8 – Optics, Photography; General (G02, G03, G09, G10)

Classification Codes

Q – Mechanical
Q1 – Vehicles in General (B60)
Q2 – Special Vehicles (B61-B64)
Q3 – Conveying, Packaging, Storing (B65-B68)
Q4 – Buildings, Construction (E)
Q5 – Engines, Pumps (F01-F15)
Q6 – Engineering Elements (F16-17)
Q7 – Lighting, Heating (F21-F28, F41-F42)

Classification Codes

S – Instrumentation, Measuring and Testing
T – Computing and Control
U – Semiconductors and Electronic Circuitry
V – Electronic Components
W – Communications
X – Electric Power Engineering

Strategy

Step 1: Keyword search in Patent Index
Step 2: Identify important classifications
Step 3: Search granted patents and/or patent applications
Step 4: Review documents
Step 5: Check cited and citing references
Step 6: Repeat from Step 3.

Questions?

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Finding Standards

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What?

A standard is a document that provides requirements, specifications, guidelines, or characteristics that can be used consistently to ensure that materials, products, processes, and services are fit for their purpose.

Understanding

Guidance

Reliability

Safety

Quality

Trust

Why?

When?

Standards change.

Where?

Government

- NIST
- NASA
- ASSIST
- GPO

- etc.

Professional Societies

- IEEE
- W3C
- NISO
- ISO

- etc.

http://library.columbia.edu/locations/engineering.html

Who?

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QUESTIONS?