ฐานข้อมูล American Chemical Society Journal

ฐานข้อมูล American Chemical Society Journal เป็นฐานข้อมูลวารสารอิเล็กทรอนิกส์จากสานักพิมพ์ The American Chemical Society ครอบคลุมสาขาวิชาเคมีและสาขาอื่นๆ ที่เกี่ยวข้อง มีวารสารให้บริการจำนวน 38 รายชื่อ ข้อมูลย้อนหลังตั้งแต่ปี 1996 – ปัจจุบัน ประกอบด้วยรายการทางบรรณานุกรม สาระสังเขป และเอกสารฉบับเต็มรูปแบบ HTML และ PDF

โดยสามารถเข้าใช้งานได้ที่ http://pubs.acs.org

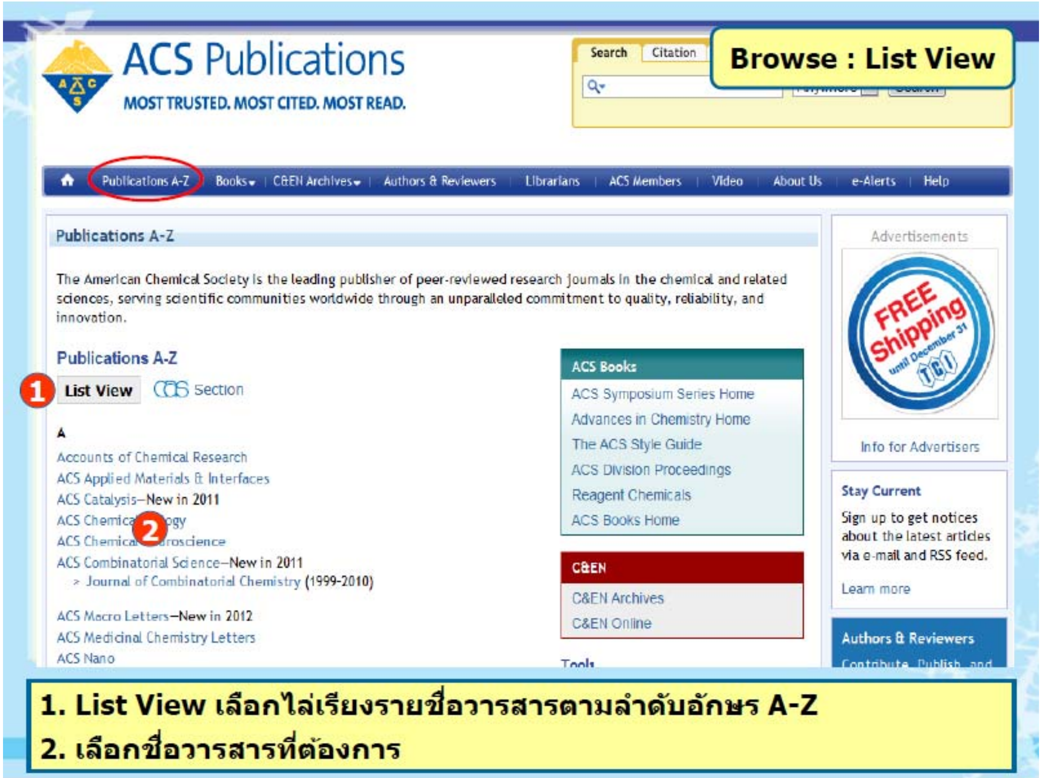
แสดงหน้า Homepage

รูปแบบการสืบค้น มี 2 รูปแบบ คือ

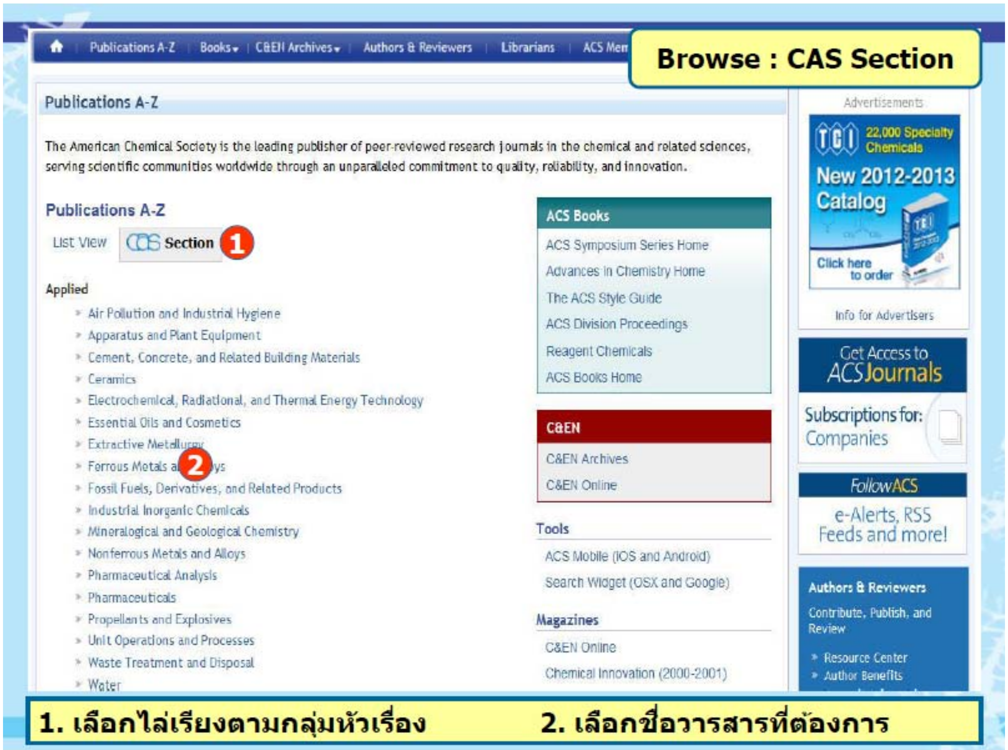
1. แบบ Publications A-Z ไล่เรียงรายชื่อวารสารตามลำดับตัวอักษร A-Z
   - List View
   - CAS Section
2. แบบ Search การสืบค้นด้วยคำค้น
   - Quick Search
   - Advanced Search

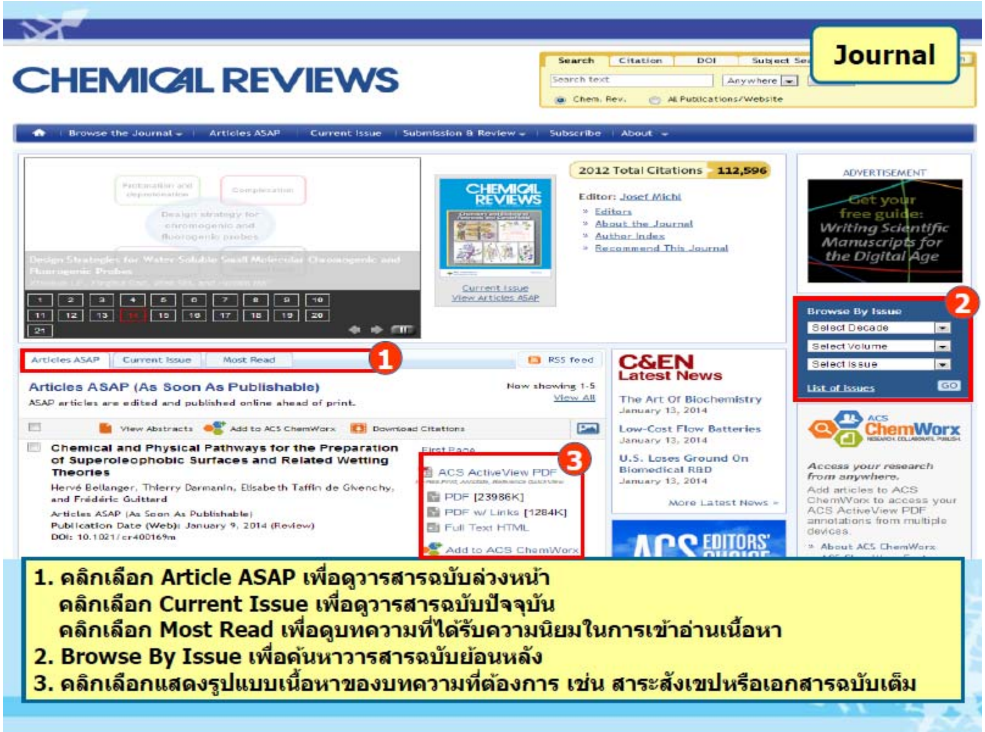
1. การสืบค้นแบบ Publications A-Z

1.1 แบบ List View



1.2 แบบ CAS Section

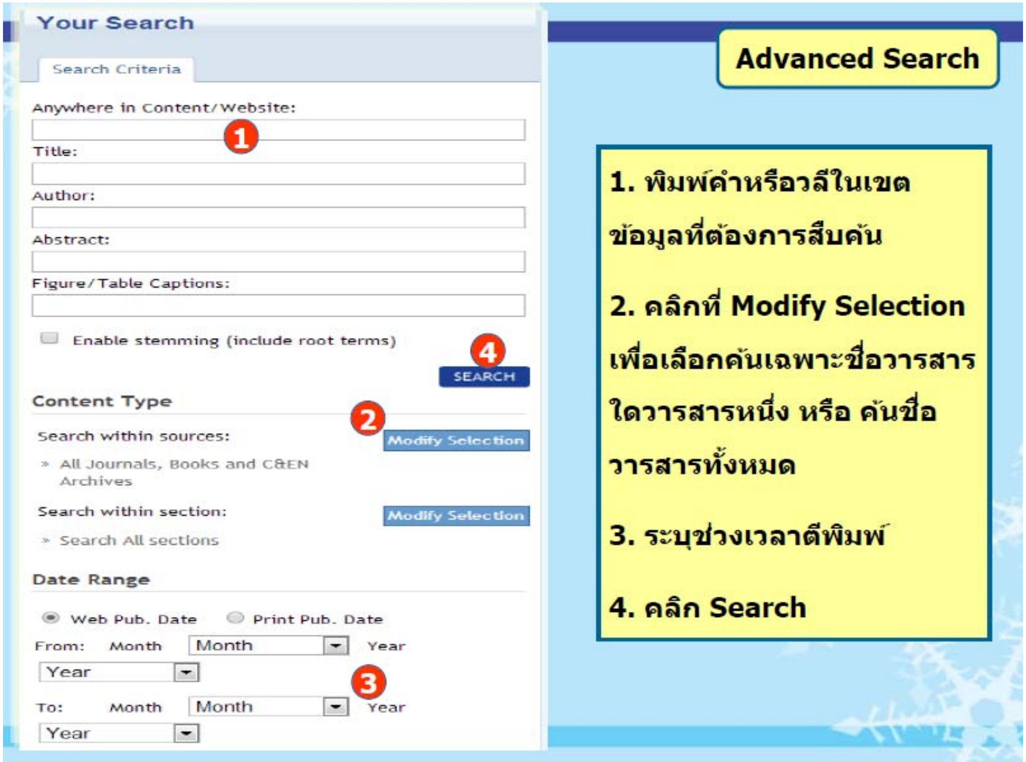




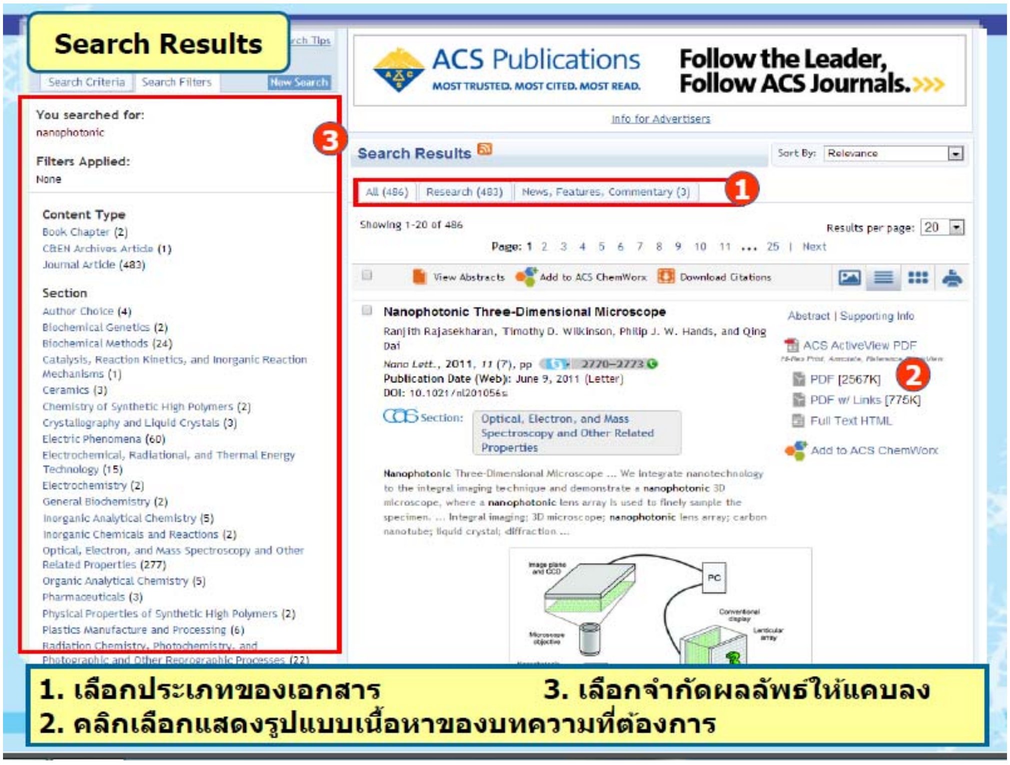
2. การสืบค้นแบบ Search

2.1 แบบ Quick Search การสืบค้นแบบง่าย

2.2 แบบ Advanced Search การสืบค้นขั้นสูง
เหมาะสำหรับผู้ที่มีข้อมูลในการสืบค้นมาก



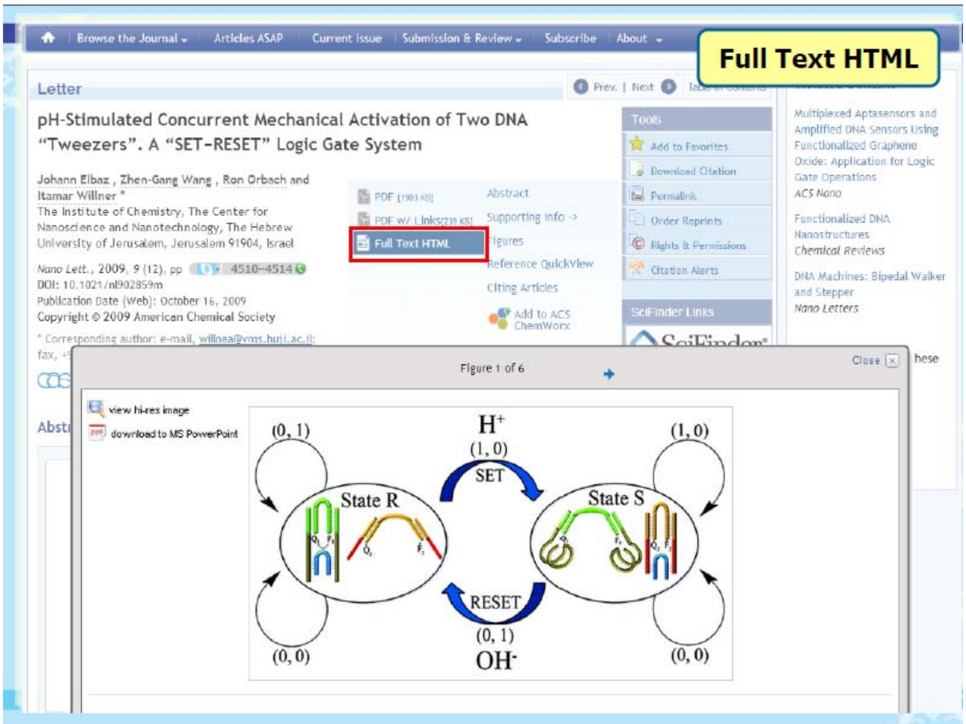
หน้าแสดงผลลัพธ์



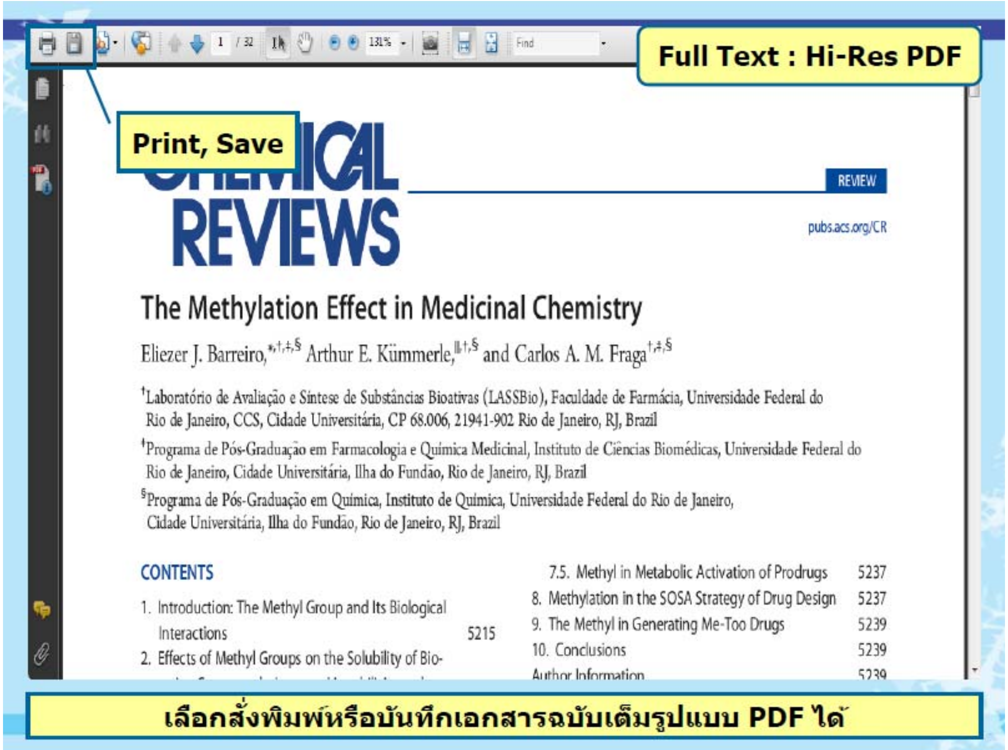
Abstract สาระสังเขป

สามารถเลือกแสดงเอกสารฉบับเต็ม ซึ่งมีให้เลือก 3 รูปแบบ ได้แก่

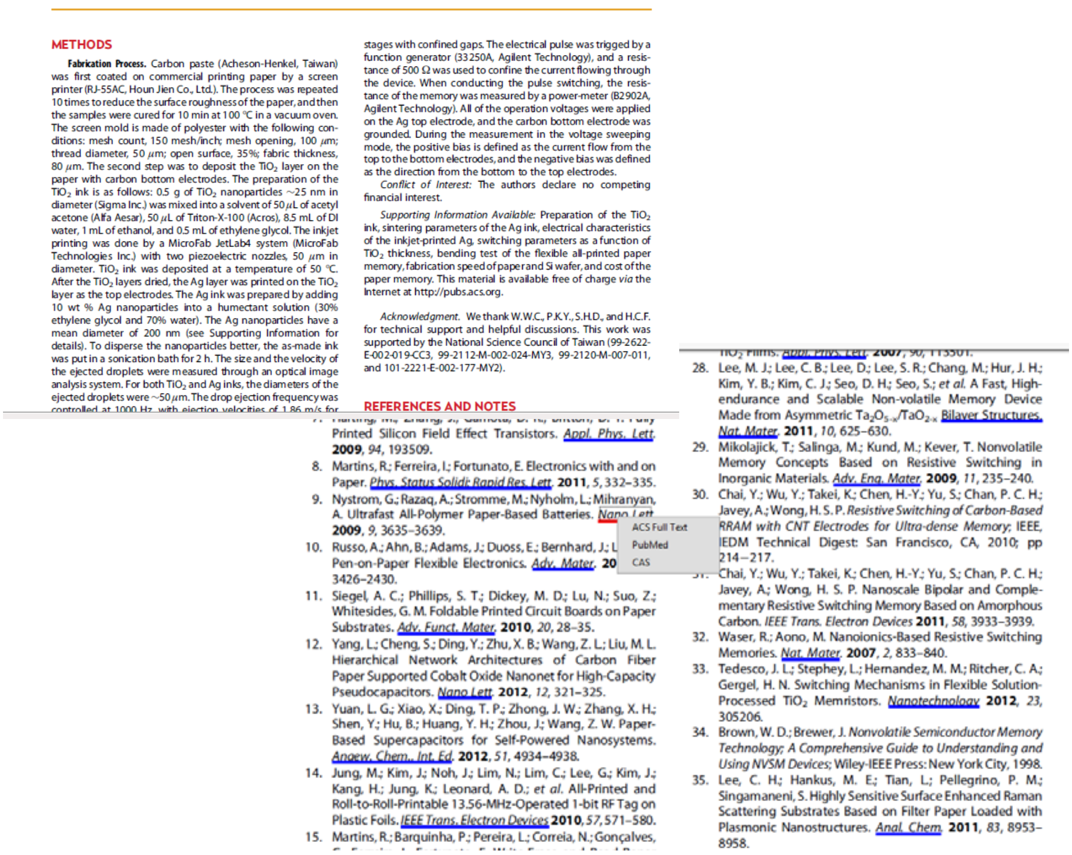
1. เอกสารฉบับเต็มรูปแบบ HTML



2. Hi Res PDF เอกสารฉบับเต็มรูปแบบ PDF ที่มีความละเอียดสูง



3. PDF w/Links เอกสารฉบับเต็มรูปแบบ PDF ที่มีเนื้อหาของเอกสาร



METHODS

Fabrication Process. Carbon paste (Acheson-Henkel, Taiwan) was first coated on commercial printing paper by a screen printer (RJ-55AC, Houn Jien Co., Ltd.). The process was repeated 10 times to reduce the surface roughness of the paper, and then the samples were cured for 10 min at 100 °C in a vacuum oven. The screen mold is made of polyester with the following conditions: mesh count, 150 mesh/inch; mesh opening, 100 μm; thread diameter, 50 μm; open surface, 35%; fabric thickness, 80 μm. The second step was to deposit the TiO_2 layer on the paper with carbon bottom electrodes. The preparation of the TiO_2 ink is as follows: 0.5 g of TiO_2 nanoparticles ~25 nm in diameter (Sigma Inc.) was mixed into a solvent of 50 μL of acetyl acetone (Alfa Aesar), 50 μL of Triton-X-100 (Acros), 8.5 mL of DI water, 1 mL of ethanol, and 0.5 mL of ethylene glycol. The inkjet printing was done by a MicroFab JetLab4 system (MicroFab Technologies Inc.) with two piezoelectric nozzles, 50 μm in diameter. TiO_2 ink was deposited at a temperature of 50 °C. After the TiO_2 layers dried, the Ag layer was printed on the TiO_2 layer as the top electrodes. The Ag ink was prepared by adding 10 wt % Ag nanoparticles into a humectant solution (30% ethylene glycol and 70% water). The Ag nanoparticles have a mean diameter of 200 nm (see Supporting Information for details). To disperse the nanoparticles better, the as-made ink was put in a sonication bath for 2 h. The size and the velocity of the ejected droplets were measured through an optical image analysis system. For both TiO_2 and Ag inks, the diameters of the ejected droplets were ~50 μm. The drop ejection frequency was controlled at 1000 Hz, with ejection velocities of 1.86 m/s for

stages with confined gaps. The electrical pulse was trigged by a function generator (33250A, Agilent Technology), and a resistance of 500 Ω was used to confine the current flowing through the device. When conducting the pulse switching, the resistance of the memory was measured by a power-meter (B2902A, Agilent Technology). All of the operation voltages were applied on the Ag top electrode, and the carbon bottom electrode was grounded. During the measurement in the voltage sweeping mode, the positive bias is defined as the current flow from the top to the bottom electrodes, and the negative bias was defined as the direction from the bottom to the top electrodes.

Conflict of Interest: The authors declare no competing financial interest.

Supporting Information Available: Preparation of the TiO_2 ink, sintering parameters of the Ag ink, electrical characteristics of the inkjet-printed Ag, switching parameters as a function of TiO_2 thickness, bending test of the flexible all-printed paper memory, fabrication speed of paper and Si wafer, and cost of the paper memory. This material is available free of charge *via* the Internet at http://pubs.acs.org.

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