



# THE DAYTON SECTION

*Fostering scientific education and research and promoting public understanding of science*

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**BULLETIN****Summer in the City Edition 2007****Meeting****August 11:** 3<sup>rd</sup> Annual Section Picnic of the New Era**Section News and Other Stuff**

- Call for Officer Nominations — page 3
  - ◆ *Nine Years* Since a WSU Faculty Member Served as Chair
  - ◆ *Fourteen Years* Since a UD Faculty Member Served as Chair
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DATE MATERIAL - MEETING ANNOUNCEMENT - DO NOT DELAY

PERMIT NO. 517  
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American Chemical Society  
Dayton Section  
Eugene M. Kettering Center  
140 East Monument Avenue  
Dayton, OH 45402-1267

# UPCOMING MEETING

## ANNUAL SECTION PICNIC

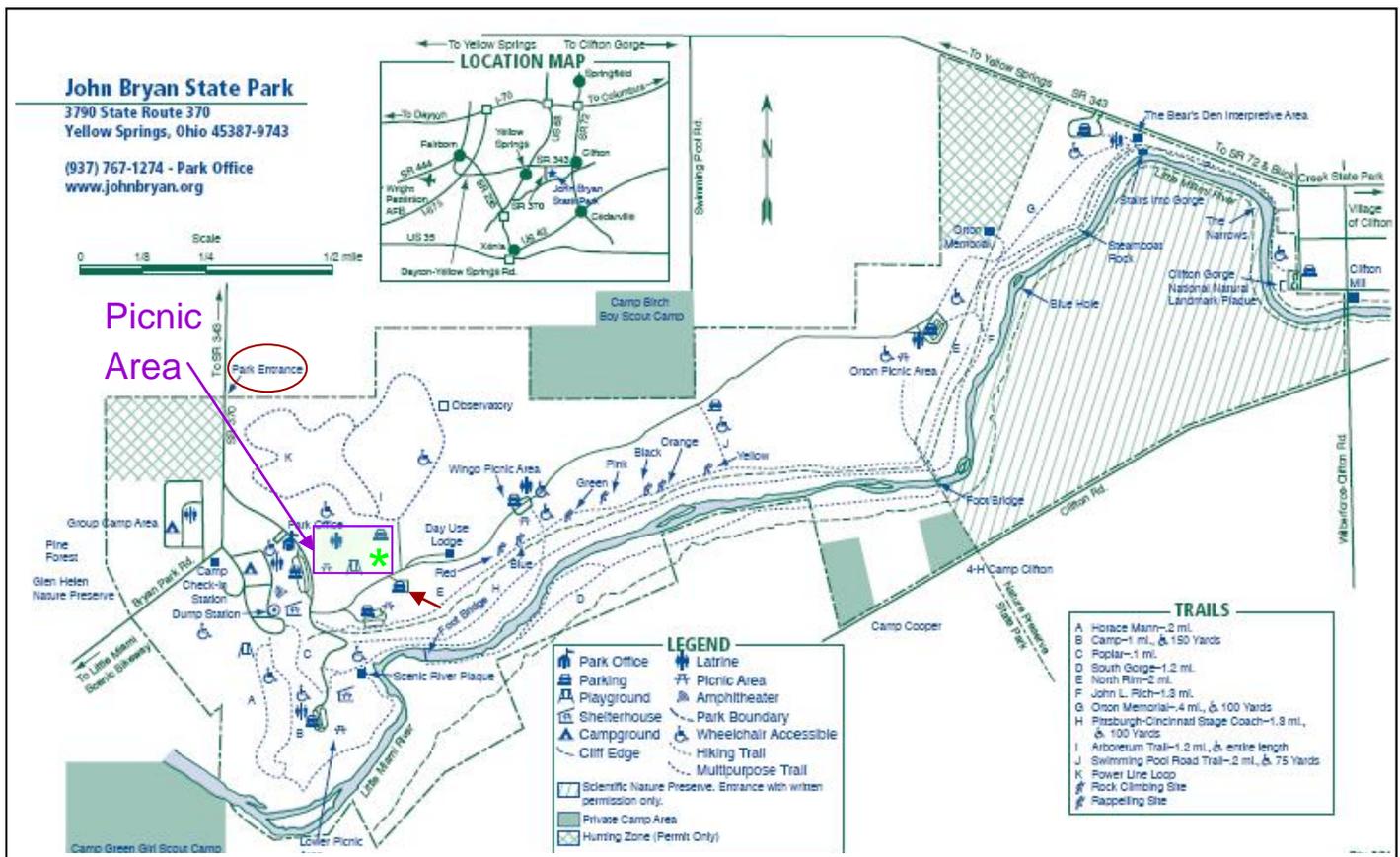
**DATE:** Saturday, August 11<sup>th</sup>  
**VENUE:** John Bryan State Park, Main Picnic Area, near playground. (Look for the banner!)  
**TIME:** 11:30 AM – 4:00 PM, Rain (*unless an incessant downpour*) or Shine!  
**KEYNOTE:** NONE!

This year we will continue our revival of an old tradition and hold a picnic for all Section Members and their families. The Section will provide hamburgers, hot dogs, veggie burgers, and soft drinks. Please bring a side dish or a dessert to share with everyone.

The main picnic area is near the playground where you enter the park off of SR 370. See below or [http://www.dnr.state.oh.us/parks/parks/pdf/johnbryanmap\\_304.pdf](http://www.dnr.state.oh.us/parks/parks/pdf/johnbryanmap_304.pdf) for more details and directions. The park offers hiking trails, a playground, and open space for all kinds of games. Those of us with kids will bring the typical stuff – soccer balls, Frisbees, badminton, and softball stuff – but feel free to bring your favorite sports paraphernalia. And there's plenty of shade for those of us who wilt in August.

For planning purposes, let us know if you'll attend and number in your party by contacting Peter Mirau at [peter.mirau@wpafb.af.mil](mailto:peter.mirau@wpafb.af.mil) or (937) 255-9153.

Let us know, too, if you're a better grill cook than Steve.



Park entrance is circled, an arrow indicates parking, and the desired picnic area is marked with an asterisk.

## CALL FOR NOMINATIONS FOR SECTION OFFICERS

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If your profession depended on the constant influx of teenagers interested in learning chemistry, you would want to help kids K-12 get interested in chemistry with outreach efforts like National Chemistry Week, TechFest, or the Patterson High School Chemistry Awards, right? You'd have to be remarkably shortsighted *not* to. Why is it, then, that no chemistry faculty member at the University of Dayton has served as Section Chair since 1993? How can it be that no chemistry faculty member at Wright State University has served since 1997?

Historically, the source of Section Officers alternated more or less between members at WSU, UD, and Wright-Patterson Air Force Base. To those of us at Wright-Pat, who have served in virtually all Section Offices since 1998, the excuses are familiar: newly hired professors do not get credit towards tenure for serving on the Dayton Section Board; several professors actually live outside the Section boundaries (working within them seemingly doesn't count); with their teaching loads, research, and university committee duties, professors are just too busy to volunteer. Well, *boo-freakin'-hoo*.

The Section currently needs at least one nominee each for Chair-Elect, Secretary, and Alternate Councilor (we already have one for Councilor, although additional nominations for this office are welcome). The duties for these offices need not be very demanding because the new Chair is free to pursue a minimal program. Furthermore, the Committee Chairs for the requisite meetings (listed below), as well as for NCW and TechFest, know what needs to be done and do practically all the work. The number of board meetings, which can be held via email or at the convenience of the Officers, by no means needs to exceed the number of Section Meetings:

- ◆ February — Poster Session and College Awards.
- ◆ May (but hosted by the Dayton Section only every 4<sup>th</sup> year) — Patterson-Crane Award.
- ◆ May/June — High School Awards.
- ◆ November — Professional Practices.

In addition to presiding over board meetings, the Chair files a report to ACS but this is just a web form that won't differ substantially from the previous year's report. The Secretary takes the minutes at board meetings but this just entails compiling the electronic reports of the other board members. The Alternate Councilor acts as liaison to the Affiliate Societies Council of Dayton, which meets for about an hour every other month except during the summer.

So, let me get this straight; you're a professional chemist, an educator, a researcher, and an ACS member yet you do not want to play a part in keeping up a 77-year tradition in fostering scientific education and research and promoting public understanding of science in your community? Or get a few more kids interested in chemistry so that in a few years they'll want to major in chemistry? Say it ain't so! Contact any current board member (see the masthead for contact info) and nominate yourself for Chair-Elect, Secretary, or Alternate Councilor.

ST

### Dayton Section Nominated for ChemLuminary Award

The ChemLuminary Planning Committee has selected the Dayton Section as a finalist for the Helen M. Free Award for Public Outreach, sponsored by the Committee on Public Relations & Communications. The winner will be announced Tuesday, August 21<sup>st</sup>, at the Westin Copley Place Hotel, America Ballroom, during the 234<sup>th</sup> ACS National Meeting in Boston. Prior to the ceremony (9 PM), section members will illustrate our public outreach activities at a one-hour poster session and mixer (8 PM) in the Essex Ballroom. If you're going to the meeting, be sure and stop by.

## PAST MEETINGS

### PATTERSON-CRANE AWARD

On May 8<sup>th</sup>, Dayton-Section members and student affiliates carpooled to Columbus for the Patterson-Crane Award, which has been given biennially by the Dayton Section since 1949 and jointly by the Dayton and Columbus Sections since 1975. Consensus could not be reached on what made the 2-hour round trip so arduous: the ubiquitous orange barrels, the Sunday drivers who, when you passed them on the right, gave us a look that said, “65 is the *limit*; it doesn’t mean you have to go that fast,” or that we had to endure each other’s company for so long, at least for those of us not in the “good” car.

The 2007 Patterson-Crane Award was presented to Dr. Gary D. Wiggins, Director, Program in Chemical Informatics, School of Informatics, Indiana University, in a very well attended meeting at the Holiday Inn on the Lane. Dr. Wiggins was gracious in accepting the award, and delivered an interesting lecture on the coming of Web 2.0 and its impact on chemistry.

The Section owes a sincere debt of thanks to the Patterson-Crane Award Committee—Steve Trohalaki, Margaret Roach, and Mary Lou Baker Jones, some of whom wouldn’t mind at all being replaced before 2009, when the Dayton Section will host the award (hint hint, nudge nudge).



One of the differences between the Patterson-Crane Award mixer and back stage with the Stones is: (a) the buffet, (b) the nametags, (c) the plethora of gray hair, or (d) the cash bar?



An estimated 2% of Dayton-Section Members have warrants out for their arrest. *Bad boy, bad boy, whatcha gonna do when they come for you?*



The 2007 recipient of the Patterson-Crane Award, Gary D. Wiggins (left), is joined by (from left to right) Theresa Huston, Chair of the Columbus Section Patterson-Crane Award Committee, and the Columbus and Dayton Section Chairs, John Long and Peter Mirau, respectively.

## PAST MEETINGS

### PATTERSON HIGH SCHOOL CHEMISTRY AWARDS

On June 14<sup>th</sup>, Section members gathered at Sinclair Community College to honor the winners of the 2007 Patterson High School Chemistry Awards. The area's top chemistry students have been recognized by the Dayton Section since 1943 but in 1990 the family of the late Austin M. Patterson — a prominent Dayton chemist — assumed sponsorship. All area high school students were invited to take a standard chemistry exam and the highest scoring applicants were then invited to write essays, which formed the basis of the final judging. The top three essayists were awarded first, second, and third prizes of \$1000, \$500, and \$250, respectively. In addition, teachers of the prizewinners received \$50 awards and the top scoring student from each high school was awarded a plaque.

The winners (their teachers) and their essay titles are:

- ◆ 1<sup>st</sup> Prize: Lauren Smith, Oakwood High School (James Slagel)  
*"The Promise of Antioxidants"*
- ◆ 2<sup>nd</sup> Prize: Jonathan Lin, Centerville High School (Bonnie Buddendeck)  
*"Benzoyl Peroxide: The Chemistry of Clear Skin"*
- ◆ 3<sup>rd</sup> Prize: Travis Pfander, Chaminade Julienne High School (Christina Tetzlaff)  
*"What's That Pink Stuff"*

The Section is indebted to Cindy Hassler and Bonnie Buddendeck, Co-chairs of the Patterson High School Chemistry Awards Committee, and to Paul Fleitz, Chair of the Education Committee. These awards would not be possible without their efforts.



The Dayton Section's top three high school students are joined by Peter Mirau (left) and their teachers.



Suzanne Noffsinger shows one of several differences between TV's *CSI* and the Miami Valley crime lab.

### CHEMISTRY OLYMPIAD EXAMINATION

Five of the highest scorers on the Patterson High School Chemistry exam accepted an invitation to take the national Chemistry Olympiad examination that each year determines the 20 students who make up the US International Olympiad Team. The international competition will be held this summer at Moscow State University, Russia. The exam consists of three segments: an objective part; problem solving; and a laboratory activity. The five students examined will be awarded \$50 for their efforts. Many thanks are due to Dr. Frank Lonadier, who administered the exam.

The Chemistry Olympiad participants (and their teachers) are:

- ◆ Jonathan Lin, Centerville High School (Bonnie Buddendeck)
- ◆ David Wang, Oakwood High School (James Slagel)
- ◆ Travis Pfander, Chamaminade Julieanne High School (Christina Tetzlaff)
- ◆ Timothy Bryce Miller, Bellbrook High School (Cindy Hasler)
- ◆ Alex Wilson, Bellbrook High School (Cindy Hasler)

## THE DAYTON SECTION RUMOR MILL

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The Board has tried to get section members like you more involved by appealing to your academic interests, your commitment to education, even your sweet tooth. All this, apparently, has failed. Now, we appeal to your base instincts.

Board controversies typically manifest themselves in rumors — some true, some not — about individual Board Members and Committee Chairs. This year is no exception, although some rumors have been particularly vicious of late (and inappropriate for inclusion in the *Bulletin*). As you imagine yourself at a kind of virtual water cooler, see if you can determine which of the more benign rumors listed below are true and which are false. Send in a correct submission and win an ACS T-shirt!

1. In the privacy of his own home, Hilmar enjoys wearing a monocle.
2. During high school, Mrs. Koerner sang lead in a heavy metal band called MerriDeath.
3. Joy knew that Jeff was “The One” when she felt the hair on the back of her knees stand out on end.
4. Steve’s 7<sup>th</sup>-grade science-fair project was “How to Electrocute Bees with a Rewired Smoke Alarm.”
5. Rachel inherited her wide hips from Grandma J.
6. During her Goth phase, Kristi used to dot the i’s in her name with Elven Stars.
7. Rajiv thinks that ASC (as in “The ASC of Dayton”) stands for “Altered State of Consciousness.”
8. John cheats at “Su Doku for Chemists.”
9. Peter has dainty ankles.
10. Larry has a recurring nightmare wherein he’s on death row and, despite his pleas for a last meal of *Chicken Turino*, the guards bring him vegetable lasagna, and laugh as they serve all the other inmates the chicken.
11. Venkat fancies himself as “the straw that stirs the drink.”

### Chemistry in the Community, a New Digital Talking Book

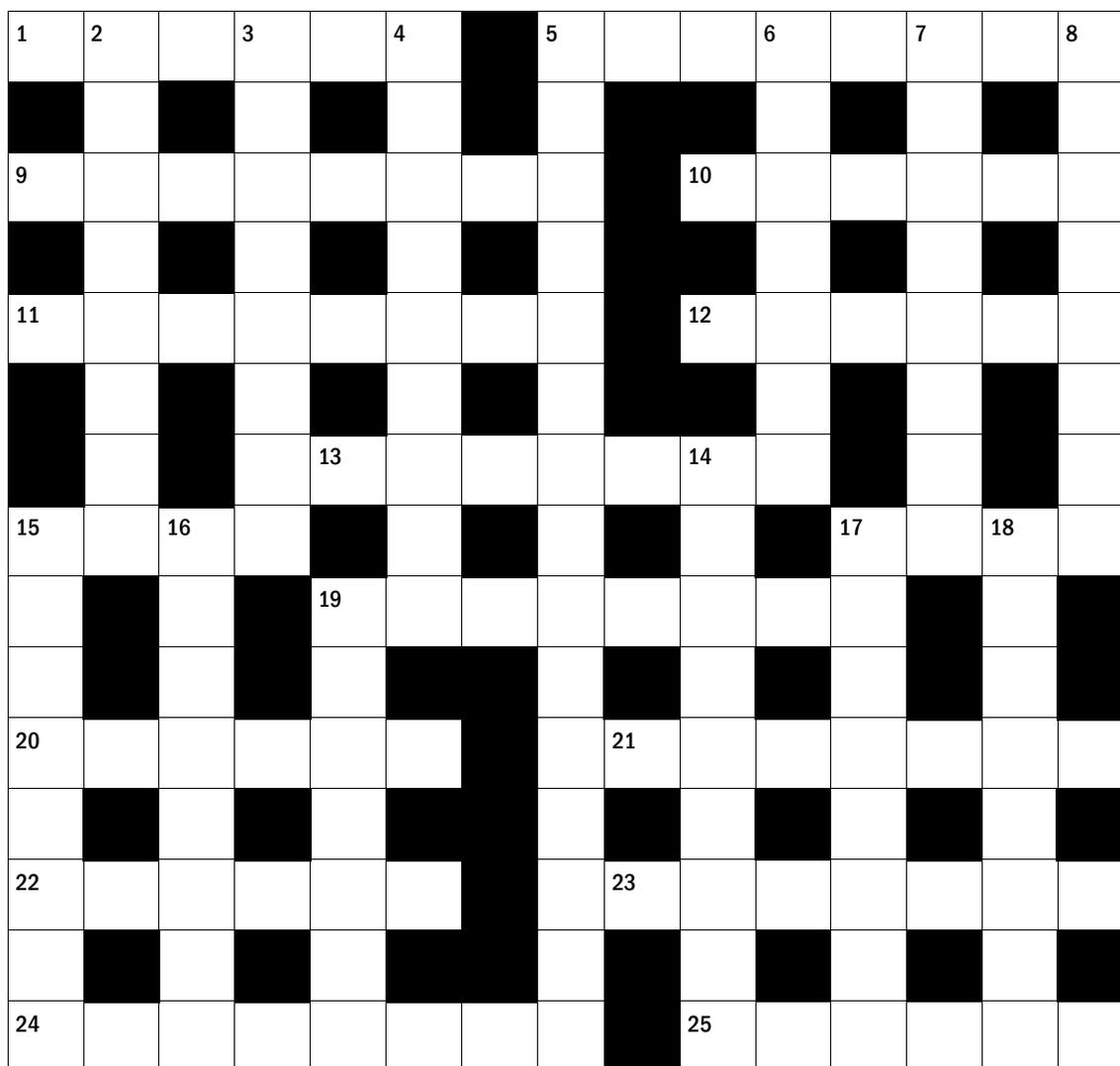
In collaboration with gh, LLC, (an assistive technology company) the American Chemical Society has converted its high school chemistry textbook *Chemistry in the Community* into a digital talking book (DTB) format. This will be the first digital talking chemistry textbook on the market and is designed to help students who are blind or visual impaired study chemistry along with their sighted peers. *Chemistry in the Community, DTB* will also be a powerful tool for students who have reading difficulties or for whom English is a second language.

Converting a high school chemistry textbook into a DTB presented interesting challenges for ACS Education Division and gh staff, as chemistry textbooks contain unique features which must be accurately represented in the digital reading of the text. For example, the pictorial nature of a chemistry textbook (illustrations, figures, tables, graphs, molecular models, formulas and equations) makes the use of a “text only” access method ineffective. In order to make a chemistry text actually usable, the essential graphics need to be communicated so they can be understood by a student who is blind or visually impaired.

A careful review of the initial drafts of the product revealed the nuances of reading dimensional analysis, stock method naming, ionic charges, and catalyzed reactions. These items were addressed along with the other graphic elements to create a product that is now ready for field tests.

ACS is currently looking for interested teachers and students to help with this phase of the project. Teachers of blind and visual impaired students will be asked to use the DTB in their classrooms during the spring and early summer and to provide valuable input on the usability and effectiveness of the product. Student input regarding usability will also be solicited. The final digital talking book is expected to be released in the fall following the completion of the field tests. If you are interested in field testing this exciting new product please contact [chemcom@acs.org](mailto:chemcom@acs.org)

# AAT-3 — CHEMISTRY CROSSWORD FOR ANGLOPHILES



## ACROSS

1. Heavy metal's A1 performance in Birmingham (6).
5. Coordinate links that lead to rings, the scale being absurd (8).
9. Device for measuring pX in remote fluid (3,5).
10. Pelt a novice inside a salt compound (6).
11. Constant: a luminous element is enclosed (8).
12. Excavates about 10 jades (6).
13. Leaving out nothing it returns to the start of time in old China (8).
15. Seconds are able to analyse metrically (8).
17. Apprehends those, especially the donor (4).
19. What many 16 often do, sounds outlandish (5,3).
20. Brings forth an elephant or a whale (6).
21. Destroyed by bombing—made it so unrecognisable (8).
22. A student initially tries, is ploughed, and tries again (6).
23. Bends having divers applications but mainly cosmetic (8).
24. An amide of this acid could have financed many a trip (8).
25. Moulded, detailed redesign for self-contained unit (6).

## DOWN

2. Capable of electrophilic substitution, like a rose by any other name (8).
3. Moving description of, for example, subatomic particles (2,6).
4. Assemble steel mail to create film (9).
5. Charm too vibrant and vivid for this kind of work done by some 16 (15).
6. Idle nag could make it—but is hardly likely to be (7).
7. Exit Dior dressed—could go with chromium, for example (8).
8. Big lids—restore, lads (8).
14. Cannibalise, Mongolise—a new word (9).
15. Ghostly lines for example (8).
16. New slant, say, for headshrinkers (8).
17. Naked priest—dip could be the outcome but I must be kept out of it (8).
18. Accidental—put across in ceaseless surroundings (8).
19. Confused where teetotalk is one who excites (7).

**Alzheimer's Avoidance Therapy\*** Unscramble the letters to reveal chemical names. Then, use the circled letters to solve the riddle. Answers next edition!

N O R F E    ○ □ ○ ○ □  
 S C O T E L A    ○ ○ □ □ □ ○ □  
 P U S S I O M A T    □ ○ □ □ ○ ○ □ □ ○

*If a mole of moles were digging a mole of holes, you would you see a mole*

○ ○    " ○ ○ ○ ○ ○ ○ ○ ○ "

**Answers from Last Edition**

TERBIUM DECANE TRIAZOLE

The struggling actress' chance encounter with Steven Spielberg, which would never have happened if she hadn't suddenly called it quits with her orthodox paramour, was "kinda" like a carboxyl group on a benzene ring because she "META" DIRECTOR.

**AAT-2 – Su Doku for Chemists!**

Using the first nine transition elements:

H	He	Li	Be	B	C	N	O	F
---	----	----	----	---	---	---	---	---

fill in the grid below so that each row, column, and 9-element subcell has only one occurrence of each element.

								Be
	H							
He				C		B	Li	
	F							C
	B				C		Be	
Li		He			F			N
H				Li				
		Be	He			N		
			B	H				O

**Quotable Quotes for \$2000, Alex**

"Man's guilt in history and in the tides of his own blood has been complicated by technology, the daily seeping false-hearted death."

—Don DeLillo

"Absolutely!  
 If you don't get a little,  
 A few butterflies,  
 No matter what you do,  
 On the first day of anything,  
 You're not human."

—Phil Rizzuto

"Keep your eyes wide open before marriage, half shut afterwards."

—Benjamin Franklin

**Answer from Last Edition:**

V	Fe	Co	Cr	Ti	Ni	Mn	Cu	Sc
Ti	Cu	Mn	Co	Sc	Fe	Cr	Ni	V
Sc	Cr	Ni	V	Cu	Mn	Ti	Fe	Co
Co	Ni	Ti	Fe	Mn	Sc	Cu	V	Cr
Cr	Mn	V	Cu	Ni	Co	Fe	Sc	Ti
Cu	Sc	Fe	Ti	V	Cr	Ni	Co	Mn
Ni	Co	Cu	Mn	Cr	V	Sc	Ti	Fe
Mn	V	Sc	Ni	Fe	Ti	Co	Cr	Cu
Fe	Ti	Cr	Sc	Co	Cu	V	Mn	Ni

Congratulations to Karl Kettinger for solving correctly the Su Doku in the last edition. Karl has won an ACS T-shirt!

\*Surveys suggest that that mental exercises, including word puzzles, may delay the progression of Alzheimer's Disease.