

April 2018 wordoku

		E		T			R	
				C	N		T	
		T	M		E			C
		M					E	N
D		S				T		O
N	T					R		
T			R		D	E		
	O		T	S				
	D			E		O		

C
D
E
M
N
O
R
S
T

Solve this wordoku in the same way as a sudoku with letters instead of numbers (each of the nine letters in each row, column and nine-square cell). Once solved, one of the overall diagonals can be rearranged into the name of a Swedish chemist and mineralogist.

April 2018 word grid

Ti	N	C
Er	Ta	N
U	Es	I

Prize entry: Using each element symbol in the grid only once, combine them together to make a single word of 13 letters.

Word.....

Just for fun: Construct as many other words as you can using a minimum of three symbols, and each symbol only once.
 6 words: OK
 9 words: Good
 12+ words: Excellent

Entry form

There are four prize puzzles on this page: crossword (cryptic answers only); wordoku; molecule search; and word grid. For each puzzle, a winner will be selected from all the correct entries received and awarded a £25 book voucher.

You can enter any or all of the prize draws, but each entrant is only eligible to win one of the individual puzzle prizes each month.

Please enter your details below and either post or email this page with your completed entries to us by **20 April 2018**. The winners of this month's puzzles will be published in the March 2018 issue, along with the solutions.

Chemistry World puzzles, Royal Society of Chemistry, Thomas Graham House, Science Park, Milton Road, Cambridge, CB4 0WF, UK
 Email: chemistryworld@rsc.org

Name

Email

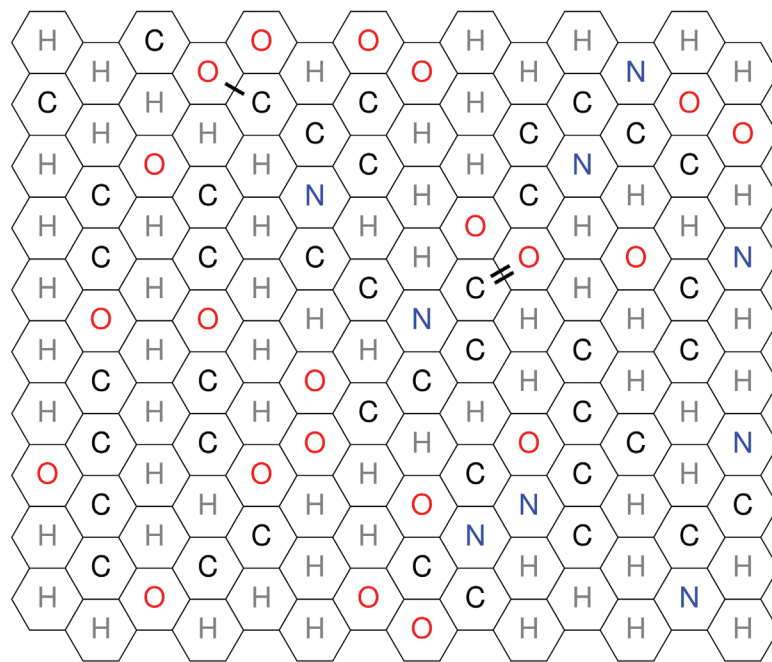
Tel

Participants are advised that any personal information supplied will be processed in connection with this competition and only in accordance with our privacy statement (www.chemistryworld.com/privacy).

April 2018 crossword

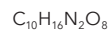
1		2		3		4	5		6		7		8
					9								
10									11				
12				13							14		
15		16						17					
													18
	19				20		21						
22													
23				24								25	
26					27				28				
29								30					

April 2018 molecule search



Connect atoms in adjacent cells using single or multiple bonds to reveal the hidden molecules. Each atom can only be used for one molecule. The hexagonal grid necessitates some distortion of bond angles, for example in five-membered or large rings.

Find these three molecules. We've put in two bonds to start you off.



Clues: These three molecules are useful due to their many teeth. One is a ring, the other two are not.

Cryptic (prize entry)

- Across
- 1 Preserve after recording bottleneck (6)
 - 4 French writer transforms the lands (8)
 - 10 Surprising seven into rock? (9)
 - 11 See 23 Across (5)
 - 12 Wood I lug around Vietnam (6, 5)
 - 14 See 23 Across (3)
 - 15 Let mica react to prevailing weather conditions (7)
 - 17 Eye odd ruins around nests (6)
 - 19 See 27 Across (7)
 - 21 Staid spinsters heartlessly turn to brutes (7)
 - 23, 14 Across, 11 Across Saw red about naval forces (3, 3, 5)
 - 24 Soil condition with lowest energy? At a particular level, yes! (6, 5)
 - 26 Some gradiometers are wireless (5)
 - 27, 19 Across Constant bravura playing demo song (9, 6)
 - 29 Care fixes attitudes (8)
 - 30 Disturbingly mercurial without Uri, but less stressed (6)

Quick (just for fun)

- Across
- 1 See 11 Across (6)
 - 4 Naval chiefs (8)
 - 10 See 15 Across (9)
 - 11, 1 Across, 25 Down French scientist, discoverer of artificial radioactivity (5, 6-5)
 - 12 Porcelain made in Saxony (7, 4)
 - 14 Banned organochlorine pesticide (2)
 - 15, 10 Across Inventor of nylon (7, 9)
 - 17, 19 Across Environmental pioneer and author of *Silent spring* (6, 6)
 - 19 See 17 Across
 - 21 American singer (1915-1998) (7)
 - 23 Person's sense of self-esteem or self-importance (3)
 - 24 Started again (11)
 - 26 Charged particle (5)
 - 27 British capital (9)
 - 29 One of the properties of a gas (8)
 - 30 Not awake (6)

Down

- 1 See 28 Down (8)
- 2 Without love, Sue abandoned upsetting egregious composer (5)
- 3 Fool all sceptical scientists initially (3)
- 5 Surgical space Anthea trembles inside (7)
- 6 Perhaps he's brewed in these islands (3, 8)
- 7 He's sadder about what's directly above him (9)
- 8 Less around argon lights (6)
- 9 Love including extremely unpopular museum (6)
- 13 I left out oddly unusual song about a gutless mob and no mistaking! (11)
- 16 Goad Union to change? It's a dinosaur! (9)
- 18 Auditor in classes-sorted! (8)
- 20 Brazilian city diplomacy? It's an old British law! (4, 3)
- 21 Sore about tin detector (6)
- 22 Shrub found in Bratislava ramparts (6)
- 25 On reflection, unfinished mural concealed primarily unrefined gold (5)
- 28, 1 Down Sort of evade a local mathematician (3, 8)

Down

- 1 Members of the crow family (8)
- 2 Big (5)
- 3 Choose (3)
- 5 Woe (7)
- 6 Goniochromism (11)
- 7 Change (9)
- 8 Afternoon nap (6)
- 9 Cap (6)
- 13 Cords used to pull parts of fabric together (11)
- 16 Litharge (4, 5)
- 18 Privation (8)
- 20 Type of energy (7)
- 21 Peak (6)
- 22 Update (6)
- 25 See 11 Across (5)
- 28 Public transport (3)

March 2018 solutions and winners

Cryptic (prize entry)

R	O	B	E	R	T	I	S	O	T	O	P	E	S		
U	B	O	E	F	A	E	E	E	T						
B	O	Y	L	E	S	L	A	W	S	I	N	A	I		
I															
D	U	R	A	B	L	E	U	R	A	N	I	U	M		
I	A	I	N	S											
U	N	D	E	R	S	T	A	T	E	M	E	N	T		
M	I	D													
M	A	R	S	H	M	A	T	I	G	O	L	D	S		
A	L	L	R	E	A	A	A	A	S						
M	E	N	I	S	C	I	C	A	D	E	N	Z	A		
I	E	P	T	E	I										
D	U	R	E	R	N	A	M	E	S	A	K	E	S		
E	V	A	E	E	H	O	I	A	E	I	E	E	U	D	U
S	H	E	L	T	E	R	S	B	U	N	S	E	N		

Quick (just for fun)

N	A	V	A	J	O	W	H	I	T	E	F	I	R
U	I	O	C	R	U	L	U						
M	O	M	E	N	T	A	R	Y	R	O	U	S	T
B													
N	O	S	E	J	O	B	N	E	U	T	R	A	L
E	U	A	O	I									
S	I	L	I	C	O	N	C	A	R	B	I	D	E
S	F	O											
T	U	R	B	O	G	E	N	E	R	A	T	O	R
A	R												
C	O	M	I	C	A	L	T	R	E	A	D	L	E
E	I	U	I	I	L								
T	E	N	O	R	L	A	C	R	I	M	O	S	O
L	I	S	T	E	R	I	A	A	S	I	D	E	S

Wordoku

The name of the element was LANTHANUM

Word grid

The nine-symbol word was CARBOCATIONS

March winners

Molecule search

John Applegarth, Kenilworth, UK

Wordoku

Liza Seymour, Bad Wörishofen, Germany

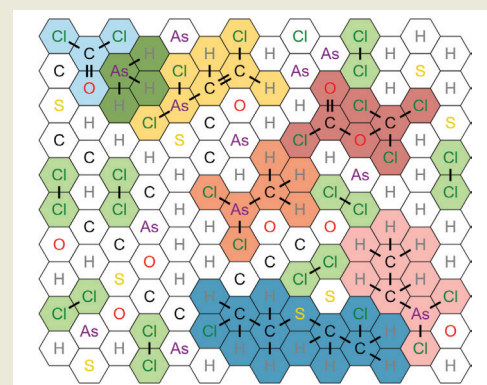
Word grid

James Nicholas, York, UK

Crossword

Steve Gill, Aylesbury, UK

Molecule search



During the first world war, these molecules were used or proposed as chemical weapons: arsine, phosgene, diposgene, sulfur mustard, lewisite, methylchloroarsine and ethylchloroarsine. There were also eight chlorine molecules to be found.

Tom Johnson is an emergency responder at the National Chemical Emergency Centre. The colleague may not be thrilled though.

A Galileo thermometer operates by using a series of weighted bulbs containing a lower density liquid such as ethanol in a sealed tube of water. Based on the weight attached to the bulb each rises at a different temperature. The colouration is from a small amount of dye in each of the bulbs. The hazards are minimal, as the ethanol's flash point is depressed by the dilution from the water. The spillage can be absorbed, double bagged and disposed of according to the local authority's wishes. The colleague may not be thrilled though.

Answer to On the spot

On the spot



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