

November 2021 wordoku

E	O	I		T				
		S	L	I				
P						I		
M	P							
		H	S		M	E		
							M	L
		P						O
				O	E	H		
				H		L	E	S

E
H
I
L
M
O
P
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 to give the surname of a French chemist known for their research on metal nanoparticles.

November 2021 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

Entry form

There are four prize puzzles on this page: cryptic crossword; quick crossword; wordoku; and science scramble. For each puzzle, a winner will be selected from all the correct entries received and awarded a £25 UK 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 email a scan or photograph of this page with your completed entries to us by **20 November 2021**. The winners of this month's puzzles will be published in the December 2021 issue, along with the solutions.

Email: chemistryworld@rsc.org

Name

Address

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.....

.....

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).

November 2021 science scramble

Similar to a word ladder, each answer provides letters that must appear - including duplicates - in the answer immediately following it. The puzzle's final answer is a scientist or someone who contributed to science.

For example:

- 1 sail
- 2 snail
- 3 saline
- 4 minerals
- 5 Neil Armstrong

Gemstone (4)

Weary (5)

Commanded (7)

Postponed (9)

Nobel prize-winning biochemist (8, 6)

Cryptic

- Across
- 1 Chemist Bob enters run abroad (6, 6)
 - 9 Still part of finer things (5)
 - 10 Without the French, national zoo orders disinfection (9)
 - 11 Mixing acids – it's brutal! (8)
 - 12 No gins for smothering parent (6)
 - 13 Some other's Chelsea buns for the astronomer? (8)
 - 15 Particular form of hotel Ronald left out? (6)
 - 17 Regularly upset Evelyn (6)
 - 18 No sneers about Danish chemist (8)
 - 20 Ultimate document? (6)
 - 21 Never changing in old Istanbul? (8)
 - 24 Check roof drape on order (9)
 - 25 Is leaving details about the letter (5)
 - 26 Cheat delayed production of something organic (12)

Down

- 1, 23 Down Hints about secret way of detecting heavy metal (7, 4)
- 2 Recreate border around nuclear generator (7, 7)
- 3 Scores speeds (5)
- 4 Mobs ride around the compounds (8)
- 5 To begin with, not everyone orders new gas (4)
- 6 On arrangement, tape over article to disappear (9)
- 7 Miracles hardly surprising for buckyball chemist (7, 7)
- 8 Pesticide found in some frozen drinks (6)
- 14 Full of energy but could be fat? (9)
- 16 Dali twisted root like a doughnut (8)
- 17 Our ape over the moon (6)
- 19 Salt as payment for the late shift you might say? (7)
- 22 Vegetation discovered in fields' edges (5)
- 23 See 1 Down

Quick

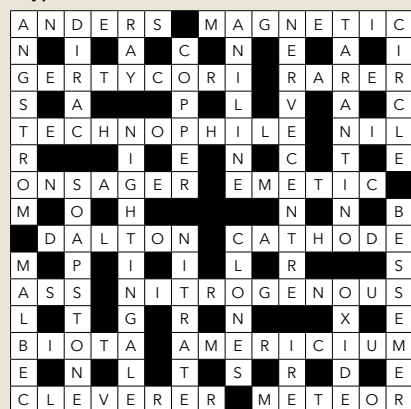
- Across
- 1 A substance that in the UK is given a unique E number (4, 8)
 - 9 Noble gas (5)
 - 10 Pharmacologist who won a Nobel prize for work on acetylcholine (4, 5)
 - 11 Secondary product in an alcoholic beverage (such as the flavours in whisky) (8)
 - 12 Hydrated soda ash (6)
 - 13 Metallic element discovered by the French chemist who also discovered gallium and dysprosium (8)
 - 15 Nicotinic acid (6)
 - 17 Assault (6)
 - 18 Many (8)
 - 20 First name of a co-recipient of the 1993 Nobel peace prize (6)
 - 21 Wastewater (8)
 - 24 Old apparatus for storing electric charge (6, 3)
 - 25 Describing a gas that follows $PV = nRT$ (5)
 - 26 Stargazers (12)

Down

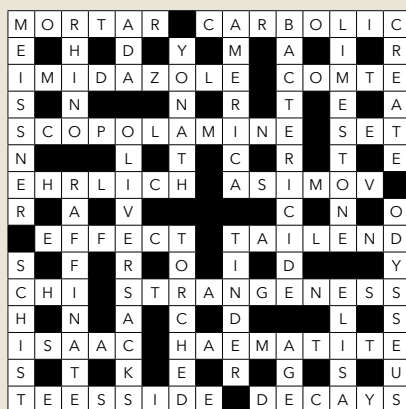
- 1, 17 Down Nobel laureate and pioneer of directed evolution of enzymes (7, 6)
- 2 Description of a compound like ferrocene (14)
- 3 _____ Jump Cannon, astronomer who created a system to classify stars based on their temperature and spectra (5)
- 4 Part of the intestine (8)
- 5 Small birds (4)
- 6 Harden rubber, originally by treatment with sulfur (9)
- 7 Devices for measuring degrees Brix (sugar content) (14)
- 8 Organic polymer found in woody plants (6)
- 14 Calculators (9)
- 16 2-Furaldehyde (8)
- 17 See 1 Down
- 19 Resolves (7)
- 22 Mendacious (5)
- 23 Open (4)

October 2021 solutions and winners

Cryptic



Quick



Wordoku

The name of the chemical element was GERMANIUM

Science scramble

- 1 Ale
- 2 Lead
- 3 Leaned
- 4 Annealed
- 5 Alexander Borodin

October winners

Science scramble
Jack Hodgson and
Ameena Naji
Southampton, UK

Wordoku
Glynn Harrington
Chorley, UK

Cryptic crossword
J M Sherwell
Birmingham, UK

Quick crossword
J Wilson
Broadstone, UK

Mark Foreman works in the nuclear chemistry and industrial materials recycling section at Chalmers University of Technology, Sweden

Retreat from the spill and raise an alarm. Only trained personnel with respirators, acid-resistant boilersuits (with hoods and gloves) and overshoes should attend the spill. They should treat it with a solid spill neutraliser and an inorganic absorbent. Do not use organic materials to soak up the spill.

Clay-based cat litter is typically made from Fuller's earth and could be used to soak up a spill of oxidising mineral acid as it can partly neutralise the acid by exchanging protons for alkali metal cations in the clay. However, organic cat litter is usually made from vegetable matter and is combustible, posing an extreme fire hazard.

Even before the spill this site was unacceptable, can this large stock of perchloric acid be justified? The second row of drums poses an additional hazard, and the drums themselves should be banded (above a spill tray).

On the spot

Answer to On the spot

