

February 2022 wordoku

A	P		B		H		S	
	N							
		E				O		
H			S				B	
P			N		E			R
	E				R			S
		A				B		
							H	
	B		E		S		A	O

A
B
E
H
N
O
P
R
S

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 an atomically thin 2D material, which was first synthesised in 2021.

February 2022 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														

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 February 2022**. The winners of this month's puzzles will be published in the March 2022 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).

February 2022 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

Symbol of radioactive element used in smoke detectors (2)

Goal (3)

South American capital (4)

Creature (6)

Thin layers (7)

First Indian woman to receive a PhD in a scientific discipline (6, 7)

Cryptic

- Across**
- Nuclear physicist raved about his anorak (6, 8)
 - Engineer altered the pedal (7)
 - Partial politicians can dally. It's a disgrace! (7)
 - I rush around chap with buggy (9)
 - Unusually easy top tip for brewer's help (5)
 - Irene masters some medical procedures (6)
 - She fell, first aid treatment being a herb (8)
 - On arrangement, a leading architect built first homes for the addicted (8)
 - Count on second hand scuba abroad? (6)
 - See 6 Down
 - Accompanying Dante oddly toting third class fancy (9)
 - Oddly ignored joke about bling being unworthy (7)
 - Charlie developed endless passion for the painter (7)
 - Polymath makes agile goalie ill on order (7, 7)

Down

- Science guy ignored odd enzymes (3)
- Terribly truncated agent (9)
- A portion of overripe cacao can make you sick (6)
- Stuck to the surface of rocky roadbeds? (8)
- 24 Across DEFGHIJKLMNO (5, 5)
- Emanate from idea about art (7)
- Vital isolation arranged for laboratory process (14)
- Cosmologist thinks when page turns (7, 7)
- Haggard queen (3)
- Mathematician endlessly fibs about a conic design (9)
- Juliet raves about a second northern city (8)
- Discovered in halibut - an oleaginous compound (7)
- China's odd agency? No - America's! (3)
- Find bliss in uncut opiates? (6)
- Insurgent a little more belligerent (5)
- Girl assumed every now and again (3)

Quick

Across

- Spanish biochemist, who discovered the bacterial virus $\Phi 29$ DNA polymerase (9, 5)
- Opposed to (7)
- Dutch city famous for its cheese market (7)
- Geological epoch of the paleogene period (9)
- Holy man (5)
- See 2 Down
- US biochemist and Nobel laureate, known for work on enzymes, proteins and viruses (8)
- British organic chemist and Nobel laureate, known for work on anthocyanins and alkaloids (8)
- British pioneer of antiseptic surgery (6)
- Non-SI unit of electric dipole moment, named after the winner of the 1936 Nobel prize in chemistry (5)
- Resembling skin (9)
- Pile-1, the first artificial nuclear reactor (7)
- Russian playwright and short story writer (7)
- CH_3COOLi (7, 7)

Down

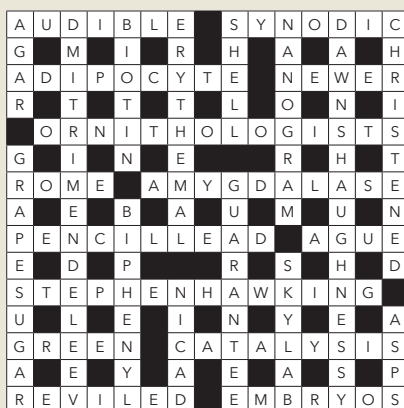
- 15 Across Israeli crystallographer and Nobel laureate, known for work on the ribosome (3, 6)
- Nitrocellulose (9)
- Corrupt, decayed (6)
- Narrative about journeying (8)
- Followers of a religion founded in the Punjab in the 15th century (5)
- Youth of Greek mythology who drowned in the Hellespont (7)
- Cornish chemist who isolated several elements by electrolysis (3, 7, 4)
- $\text{As}(\text{CH}_3)_2$ (7, 7)
- Charged particle (3)
- Describing boron in BCl_3 for example (9)
- Common furniture beetle (8)
- metal, type of alloy used in bearings (7)
- Basis of the binary system (3)
- Acid, $\text{C}_{22}\text{H}_{42}\text{O}_2$, present in rapeseed oil (6)
- Japanese physicist and Nobel laureate, known for work on electron tunneling in semiconductor materials (5)
- Scorching (3)

January 2022 solutions and winners

Cryptic



Quick



Wordoku

The materials scientist was Joanna AIZENBERG

Science scramble

- Sea
- Vase
- Slave
- Salver
- Overalls
- El Salvador
- Alessandro Volta

January winners

- Science scramble**
 Brian Taylor
 Bolton, UK
- Wordoku**
 Louise Simpson
 Banff, UK
- Cryptic Crossword**
 Walter Cuthbert
 Cheshire, UK
- Quick Crossword**
 Latha Kadalayil
 Eastleigh, UK

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

You should have a plan for dealing with this event. Maybe keep in the hood a spare needle and the tools for attaching it to the syringe so you can do this quickly without bringing your hand into a strong radiation field. Failing that, announce loudly to the rest of the lab what has just happened, lay the syringe down in a tray (behind a lead brick), remove your gloves and leave them in the hood, shut the sash and step away. Fluorine-18 has a half-life of 110 minutes - the simplest way to dispose of the radioactive material trapped in the syringe is therefore to wait 24 hours and it will be over 1000 times weaker.

On the spot

