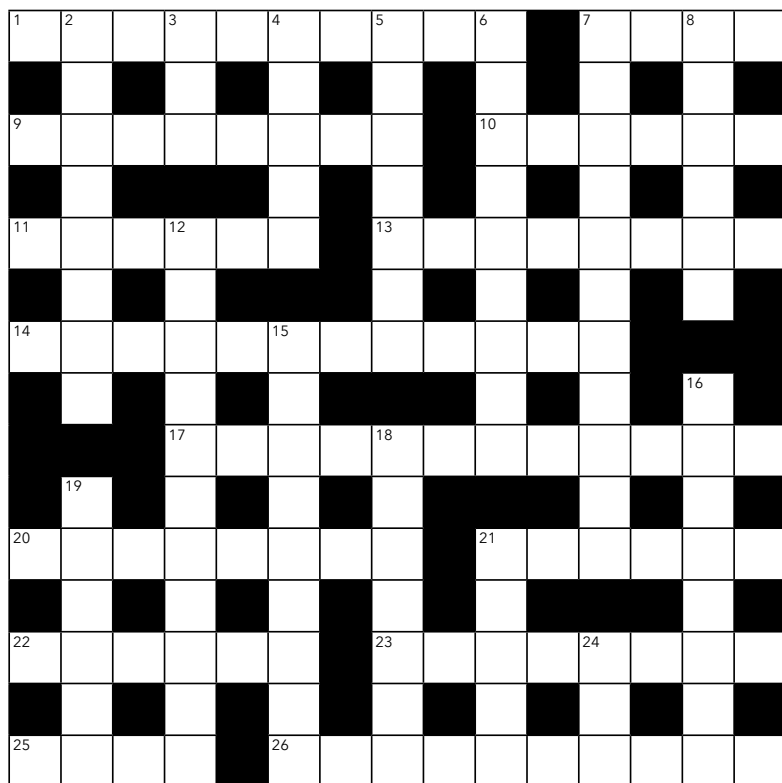
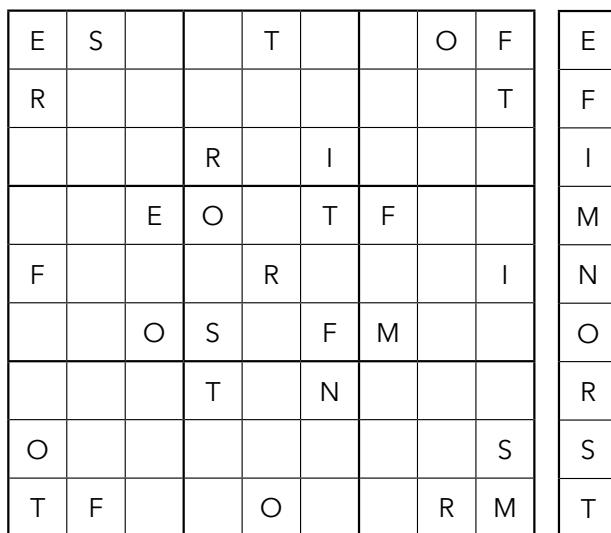


July 2024 crossword



July 2024 wordoku



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, rearrange one of the overall diagonals to give a drug commonly used to treat Type 2 diabetes.

Cryptic

Across

- 1 Current form of artful gems (4, 6)
- 7 Note hidden in lime mortar (4)
- 9 Logos in a design having all angles equal (8)
- 10 Wild lynx extremely elusive in the compound (6)
- 11 Little angle Charlie cares about? (6)
- 13, 21 Across Escapes turmoil abroad for treasures (8, 6)
- 14 Working ballerinas up for something astronomical (6, 6)
- 17 Maybe enter odd privet maze to find the physicist (6, 6)
- 20 Leftover heartless rival used somehow (8)
- 21 See 13 Across (6)
- 22 Botticelli finally doing fancy colour (6)
- 23 Asleep in work? Correct! (8)
- 25 Most agreed to some party – men only (4)
- 26 Engineer mentioned a correction (10)

Down

- 2 Frees from shogun's traps (8)
- 3 Learner abandons golf, returning to poor visibility (3)
- 4 Histrionic Rishi leaves for a drink (5)
- 5 Eel's lip could make this shape? (7)
- 6 Removing silicon, zaps mixture on arrangement for Nobel laureate (3, 6)
- 7 Having many connections until TV meal prepared (11)
- 8 Mike once left minimum amount of red lead (6)
- 12 Digging without any kit? (5, 6)
- 15 Lose value over sugar (9)
- 16 Locals turn it into a heavenly body (8)
- 18 Overshadow the Spanish spice mixture (7)
- 19 Chemist rents around November (6)
- 21 Endless monody for the biochemist (5)
- 24 Allowed the French to start (3)

Quick

Across

- 1 Branch of mathematics (10)
- 7 Asian desert (4)
- 9, 6 Down 17th century natural philosopher and first woman to attend a Royal Society meeting (8, 9)
- 10 Amino acid, C₅H₁₁NO₂ (6)
- 11 Palaeontologist whose collection of Jurassic fossils can be seen in a museum in Kimmeridge, Dorset (6)
- 13 Allotrope of carbon (8)
- 14, 2 Down Chemical process in which two molecules combine to form a single molecule, usually with the loss of water (12, 8)
- 17 Subject of Queen's lead guitarist Brian May's PhD (12)
- 20 French chemist eponymised in a reaction and reagent, the latter having the general formula R-MgX (8)
- 21 Finch, *Spinus spinus* (6)
- 22 Venetian painter (6)
- 23 Drug (8)
- 25 Smallest form of an element (4)
- 26 German chemist and designer of the conical flask (10)

Down

- 2 See 14 Across (8)
- 3 Label (3)
- 4 Earthy materials (5)
- 5 Old name for TiO₂ and the largest moon of Uranus (7)
- 6 See 9 Across (9)
- 7 Turns to jelly (11)
- 8 Primate (6)
- 12 Old name for Element 80 from which it gets its atomic symbol (11)
- 15 Type of explosive, RNHNO₂ (9)
- 16 Description of any one of the 15 elements from atomic number 89 to 103 (8)
- 18 1st, 2nd, 3rd, 4th etc. (7)
- 19 French analytical chemist and defender of the law of constant proportions (6)
- 21 Nerve agent, C₄H₁₀FO₂P (5)
- 24 Bauxite and galena for instance (3)

Quick quiz:

- Vincent Van Gogh's famous *Sunflowers* paintings have faded from a bright yellow to a dull brown due to the oxidation of a yellow pigment based on which metallic element?
- Harris Tweed originally got its colours from local lichen. What was the easily available mordant used to bind the dye to the fabric?
- Which alkali and alkaline-earth metals produce the following colours in flame tests: red (alkaline earth metal), intense yellow (alkali metal), red-violet (alkali metal), lilac (alkali metal)?
- Vantablack* is the trade name of a super-black coating invented by Ben Jensen and is claimed to be the world's darkest material. The name stands for 'vertically aligned nanotube arrays' but what element is it formed from?
- What connects the following elements: chlorine, indium, iodine, rhodium and rubidium?

Solutions: 1. Chromium 2. Urine 3. Strontium, sodium, rubidium, potassium, respectively 4. Carbon 5. They are all named after colours

Entry form

There are four prize puzzles on this page: cryptic crossword; quick crossword; wordoku; and coronene. 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 July 2024**. The winners of this month's puzzles will be published in the August 2024 issue, along with the solutions.

Email: chemistryworld@rsc.org

Name

Address

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).

July 2024 coronene puzzle

This puzzle is based on coronene. Using the elemental symbols (and not switching the 2 letters of any 2-letter elemental symbols), place each of the seven elemental symbols in the hexagons to spell out three words reading diagonally (plurals allowed). In each of the four puzzles there will be a shared element in the middle hexagon which when combined and reading across will spell out the name of a compound.

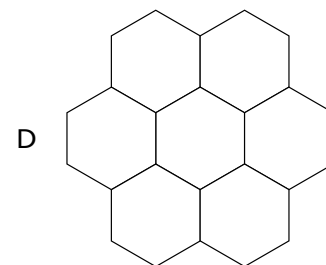
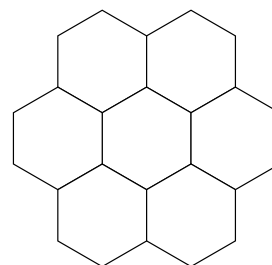
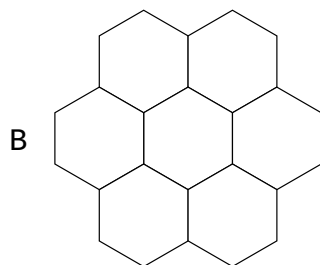
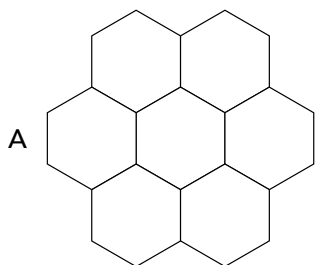
Elements:

A. C, Ds, Er, He, Re, S, W

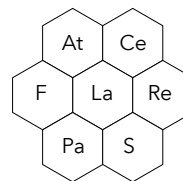
B. Al, As, Ca, Er, P, S, Se

C. Es, Ge, Po, S, Ta, Te, Y

D. Er, I, Ne, No, Pt, S, Ts



For example:



Answers:

Atlas

Flare

Palace

June 2024 solutions and winners

Cryptic

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| L | U | D | D | I | T | E | C | H | I | C | A | G | O |
| J | A | M | X | A | M | L | P | | | | | | |
| S | A | N | D | P | I | P | E | R | P | I | E | C | E |
| E | I | A | L | A | U | S | N | | | | | | |
| L | E | P | I | D | O | P | T | E | R | I | S | T | S |
| P | L | R | S | I | A | E | | | | | | | |
| R | U | B | Y | W | I | T | H | S | T | A | N | D | S |
| O | E | L | V | E | Y | D | A | | | | | | |
| T | O | R | R | I | C | E | L | L | I | G | R | A | M |
| O | N | M | V | E | O | E | | | | | | | |
| P | H | O | T | O | R | E | C | E | P | T | I | V | E |
| L | U | U | T | L | C | O | E | | | | | | |
| A | T | L | A | S | H | E | L | M | H | O | L | T | Z |
| S | L | I | E | Y | E | T | R | | | | | | |
| M | E | I | T | N | E | R | N | I | R | V | A | N | A |

Quick

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

Wordoku

The chemical biologist with a particular interest in peptides and proteins was (Ali) TAVASSOLI

Coronene puzzle

- A. Bacon, Scorn, Second
B. Arcane, Recap, Scarf
C. Noise, Pain, Snip
D. Genes, Linen, Renew

The compound running across was cocaine.

June winners

Coronene
G D Hosken
Maidstone, UK

Wordoku
Mark Nichols
Rugby, UK

Cryptic crossword
Nick Gudde
Windlesham, UK

Quick crossword
Sue Howarth
Wychbold, UK