

ENGINEERING CROSSWORD PUZZLES

for adults

A close-up photograph of a red pencil with a sharpened lead tip, resting diagonally on a black and white crossword puzzle grid. The grid has several numbers visible: 14, 16, 17, 19, and 20. The pencil is positioned over the number 14.

by Myles Mellor

I dedicate this book to my loving wife, Debby; and my sons Mark, Matt, Winston and Russell, and their families, for all their support through the years.

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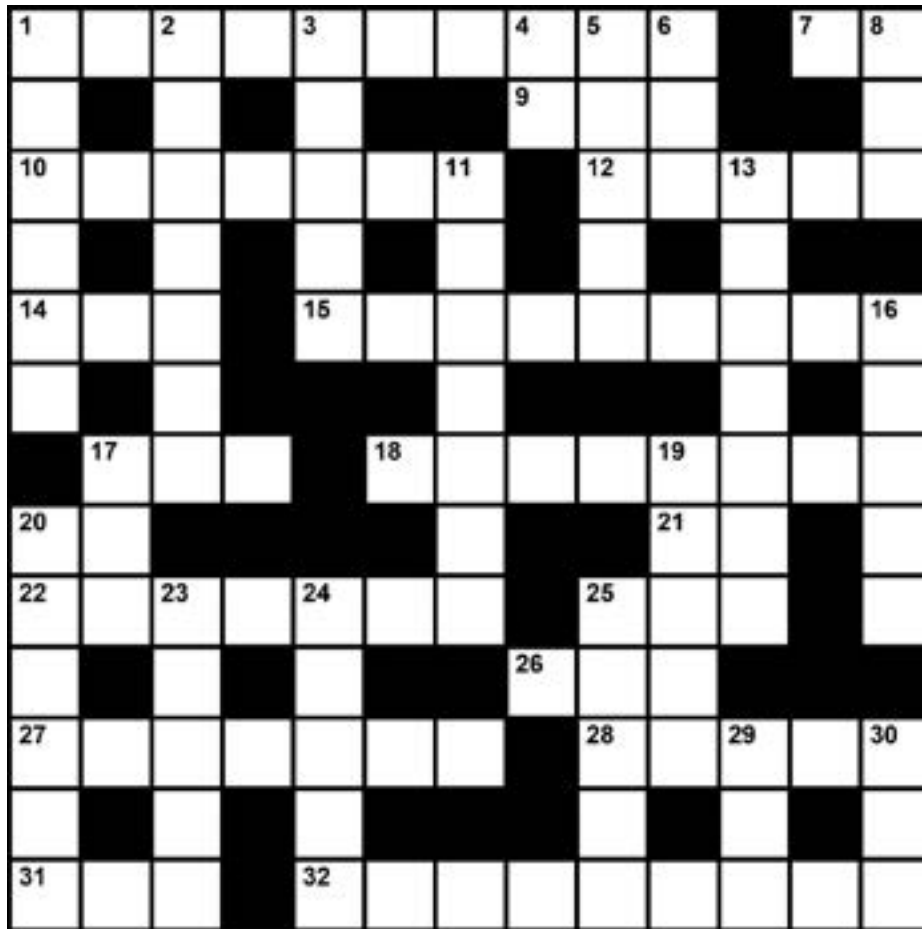
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NANOCHIP



- 2 3D machine
- 3 Damp
- 4 IOS, for Apple—abbr.
- 5 Technology used in self-driving cars
- 6 Approving vote
- 8 It was discovered by Swiss scientist Friedrich Miescher
- 11 Go higher
- 13 It has a toothed wheel and pawl
- 16 Escapade
- 17 It needs refinement
- 19 Nation that first invented the compass
- 20 Fly
- 23 Auroral research program that was turned over to the University of Alaska
- 24 Heavily covered, as in ___ with mud
- 25 Paradox that is the apparent contradiction between lack of evidence and high probability estimates for the existence of extra-terrestrial civilizations
- 29 Greek symbol for the golden ratio
- 30 Unpleasant sound

ACROSS

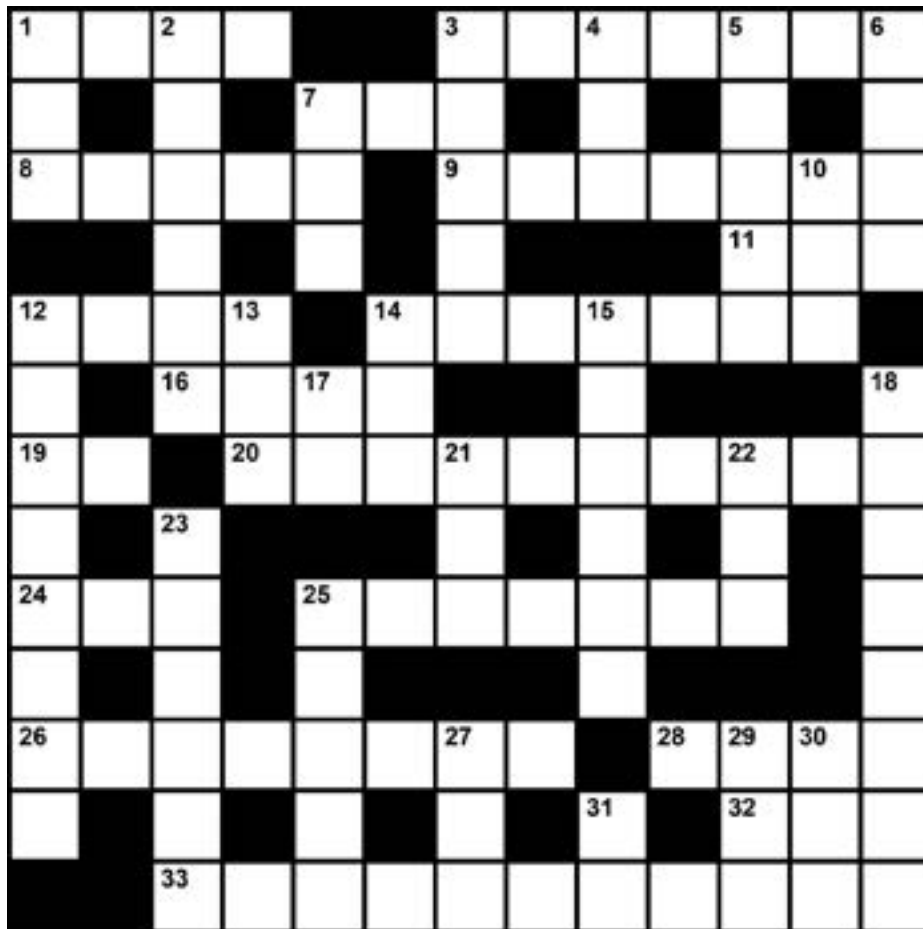
- 1 In this kind of prototype, bits of information are represented by threads of wire and tiny doughnut-shaped magnetic cores
- 7 Data storer
- 9 Automotive engineers' org.
- 10 Increase the valence of an element by removing electrons
- 12 Agency that organized a "Challenge" series of races for robotic cars
- 14 Speculate
- 15 Concerned with hypotheses
- 17 Sun or moon
- 18 Ohio researchers found a way to use this to change body cells from one type to another
- 20 Ending for plan and lid
- 21 Inert gas symbol
- 22 Conveyance
- 25 ___bit
- 26 "Perfect" number

- 27 Pioneering computer scientist who said: "hardware is really just software crystallized early"—2 words
- 28 Very fast
- 31 Perception out of the ordinary
- 32 Relating to an evolutionary theory

DOWN

- 1 Vacuuming robot invented by Joe Jones

STORMRAM



- 10 A while back
- 12 Name of the surgical robot developed for taking samples in breast biopsies
- 13 Fall a little
- 14 Tappan ____ Bridge
- 15 Infuse with oxygen
- 17 Goes with Mrs
- 18 Diffusing by absorption
- 21 PC's "brain"
- 22 Private
- 23 Name of Professor Qing-Chang Zhong's concept for stabilizing the power grid
- 25 Book or manual giving operational instructions—2 words
- 27 Unwell
- 29 Third in the family
- 30 ____-negotiable
- 31 Tin symbol

ACROSS

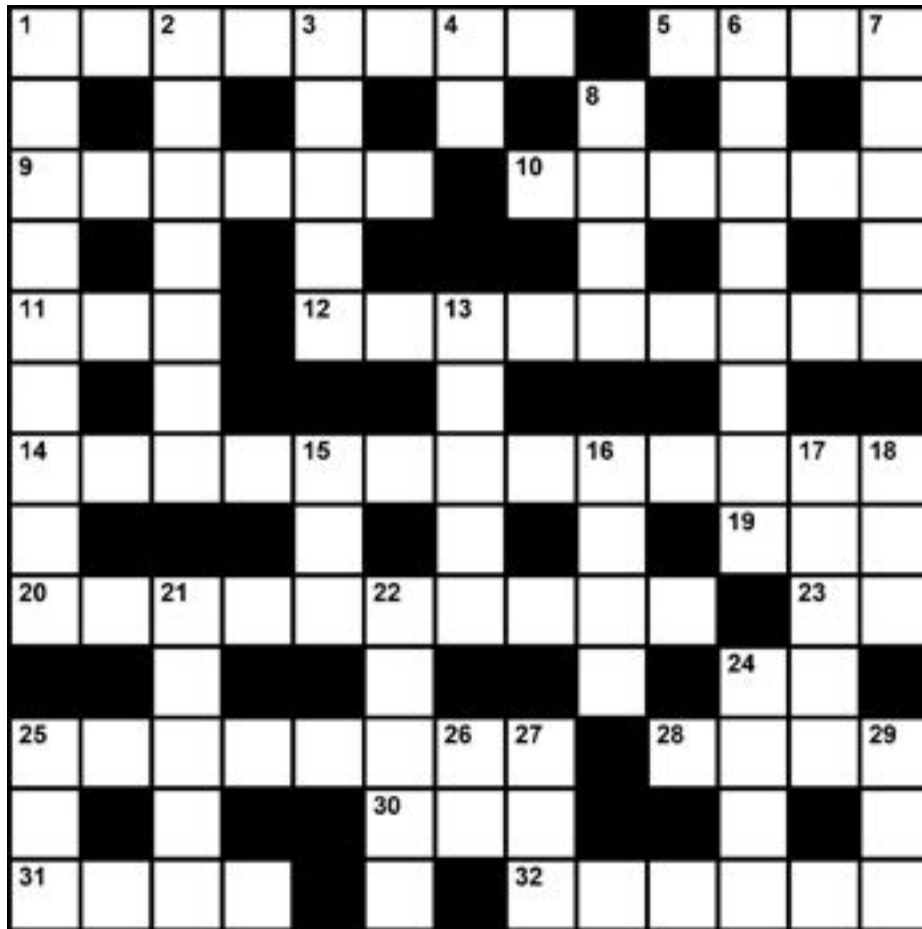
- 1 Observatory that can now detect gravity waves
- 3 Smallest and densest type of star known to exist
- 7 Letters before graphy or logy
- 8 Unit of magnetic field strength
- 9 Oblong
- 11 Geological period
- 12 Lose traction
- 14 Autonomous plane start-up founded by Google founder Larry Page
- 16 Sir Arthur Eddington described the gradual dispersal of energy as evidence of an irreversible "arrow of ____"
- 19 Alternative word
- 20 Forerunners
- 24 Is able
- 25 Space Center location
- 26 He wrote the bestseller, "The Martian"—2 words
- 28 Little BMW
- 32 Positive or negative particle

- 33 Big space news of 1969—2 words

DOWN

- 1 Record
- 2 Sacrificial chess opening
- 3 Alicia Keys hit
- 4 Craft in the tabloids
- 5 Technology now being used to measure aquifer levels, satellite-mounted ____
- 6 River that flows through nine countries
- 7 Unit of pressure

DEEP MIND



- 16 Marketing category after boomers
- 17 One more time
- 18 Transmission setting
- 21 Pulls hard
- 22 Microsoft's cloud platform
- 24 Subatomic particle
- 25 Ultimate, in degrees
- 26 Two prefix
- 27 Tide flow
- 29 Hi-tech film effects, briefly

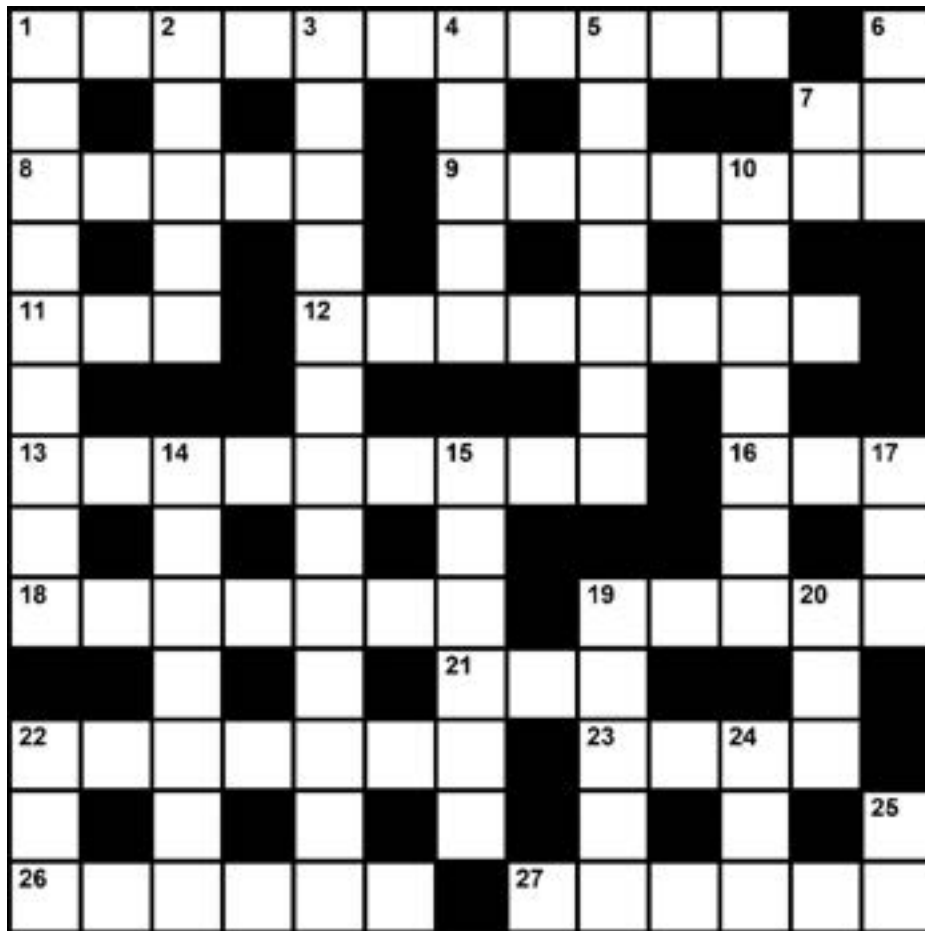
ACROSS

- 1 Google's machine that plays Go much better than its predecessor, Alpha Go
- 5 Pitch in
- 9 It may be the computer building block of the future, goes with 25 across
- 10 The field of vision
- 11 Even so
- 12 Working well
- 14 Based on scientific and industrial progress
- 19 Self concept
- 20 Stock-market activity often assisted by algorithms
- 23 ____, shucks!
- 24 Transcendental number
- 25 See 9 across
- 28 Element No. 30
- 30 Sternum attachment
- 31 Water channel of a kind
- 32 Stanford professor setting up optical fiber networks to locate earthquake waves, Biondo ____

DOWN

- 1 Solved a code
- 2 Unpredictable
- 3 His law predicted that the number of components of integrated circuits would grow exponentially
- 4 Rejection
- 6 Proof
- 7 Propose
- 8 Description for a project
- 13 Recorded legally
- 15 Where Nobel prizes are awarded, for short

INERTIA



- 19 Noble gas
- 20 Formal vote
- 22 Race, as an engine
- 24 Flight connection word
- 25 Anchorage state

ACROSS

- 1 Important investigative technique in the field of astronomy, fiber optics and engineering
- 7 Golden state, abbr.
- 8 Hoax, trick or deception in cyberspace
- 9 Heaviest naturally occurring element
- 11 Braking system
- 12 _____ S9, Bitcoin's most sophisticated mining rig

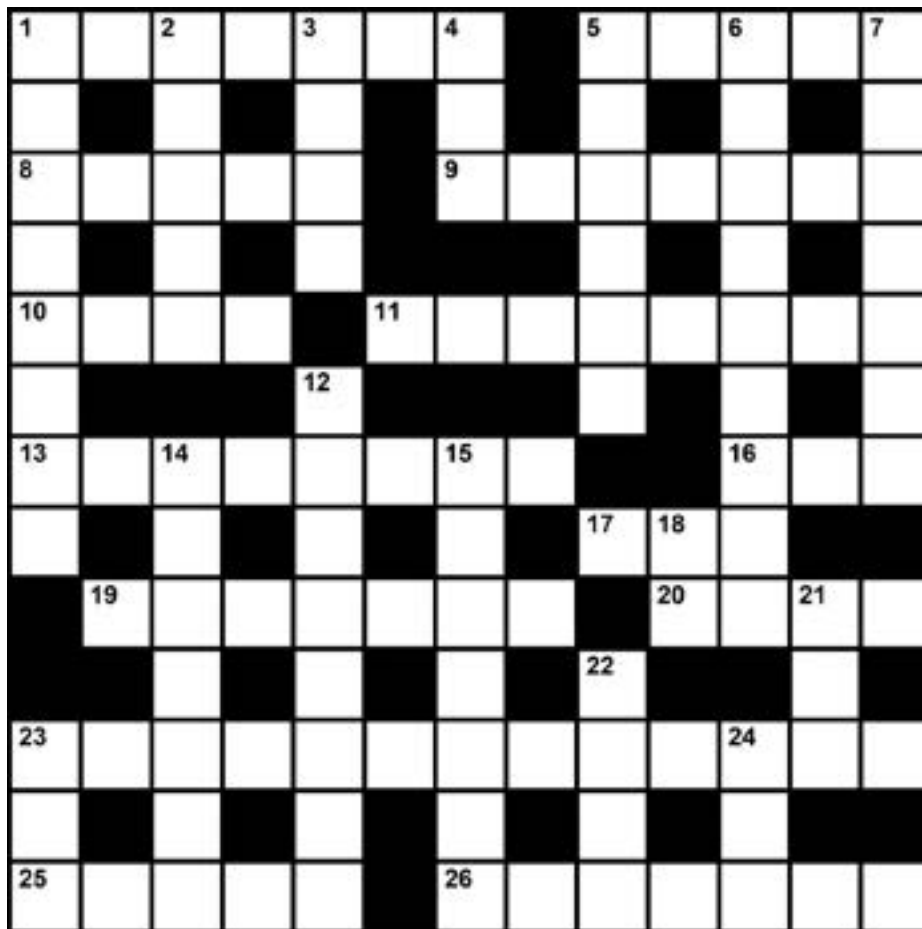
- 13 Natural electrical discharge
- 16 Goes with meta in seo terminology
- 18 Characterized by constant change and motion
- 19 Imaging lab output
- 21 Copy
- 22 TV controllers
- 23 Celestial exploder
- 26 Sun shields
- 27 Expose

DOWN

- 1 Put in place
- 2 Moves, as a current

- 3 It measures the index of a substance as regards how much it will change the direction of light
- 4 Attach to a support
- 5 Locating the source, e.g.
- 6 Memory
- 7 Copper symbol
- 10 Immobility
- 14 Mapped sequences
- 15 Enclose
- 17 Nitrogen or helium

SOLENOID



- 15 Makers of the world's first fully electric truck
- 18 Radioactive transuranic metallic element
- 21 Prefix with center
- 22 Diagnostic test, of a sort
- 23 Word with second, minute or hour
- 24 Game arbiter

ACROSS

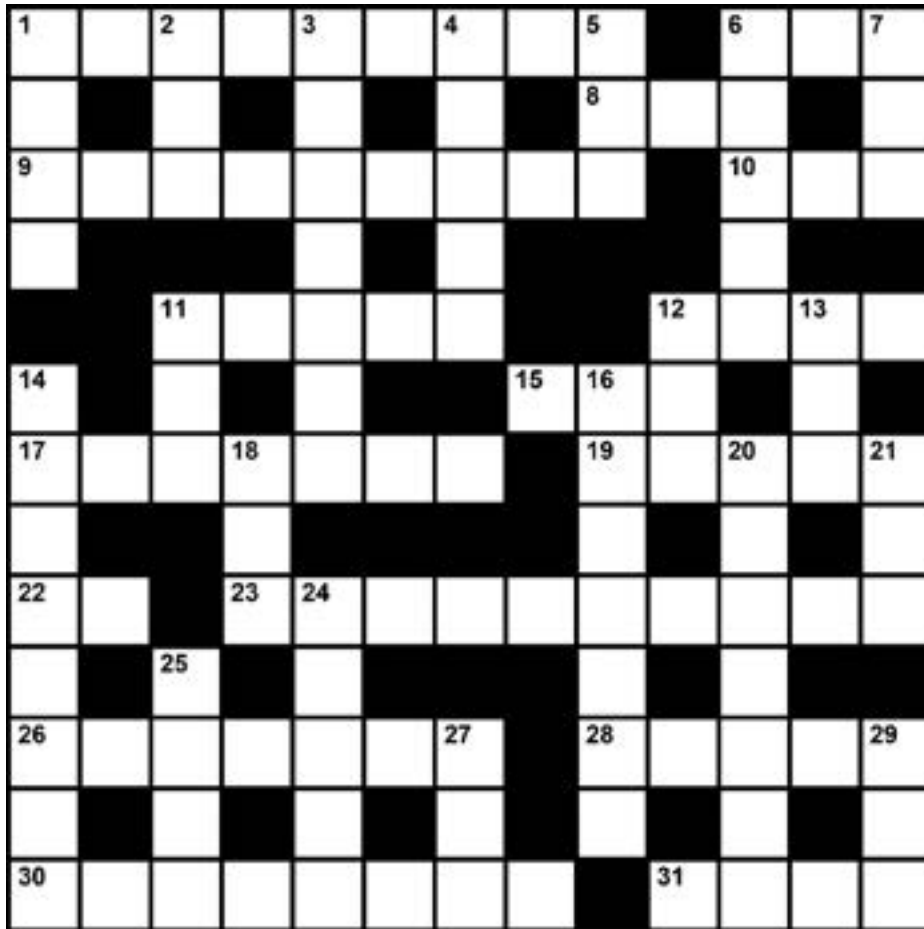
- 1 Quadcopter makers, _____ Robotics
- 5 Became motionless, as a computer
- 8 Turbine part
- 9 It measures the distance between two points
- 10 Fe
- 11 Receivers
- 13 Machines that resemble human beings
- 16 Worldwide web

- 17 Longitude's alternative, for short
- 19 Endangered tuna due to high demand for it in sushi restaurants
- 20 One thousandth of a second
- 23 Relating to the power produced by mechanical pressure on certain crystals
- 25 Evaluated as to quality
- 26 Surplus water flows

DOWN

- 1 Standing upright
- 2 Part of TNT
- 3 Land area
- 4 Lister's abbr.
- 5 "Bucky's" last name—he popularized the geodesic dome
- 6 Competitors, for example
- 7 Sincere
- 12 Current-carrying coil of wire
- 14 It decreases the strength of a solution

BLOCKCHAIN



- 13 No in French
- 14 Microsoft's device that enables experiencing a mixed reality
- 16 They offer deep learning and machine learning and nanodegrees
- 18 Under
- 20 Lack of transparency
- 21 A very long time
- 24 Giggle or chuckle
- 25 Suffix in nuclear physics
- 27 Source of solar power
- 29 TV room

ACROSS

- 1 Most popular game ever, released by Niantic—2 words
- 6 Carnegie Mellon's 360__ 4, a 360 degree camera
- 8 Golf ball position
- 9 12-legged robot
- 10 Light line
- 11 Transfer data for a periphery device into temporary storage
- 12 Company that developed the Xperia home robot

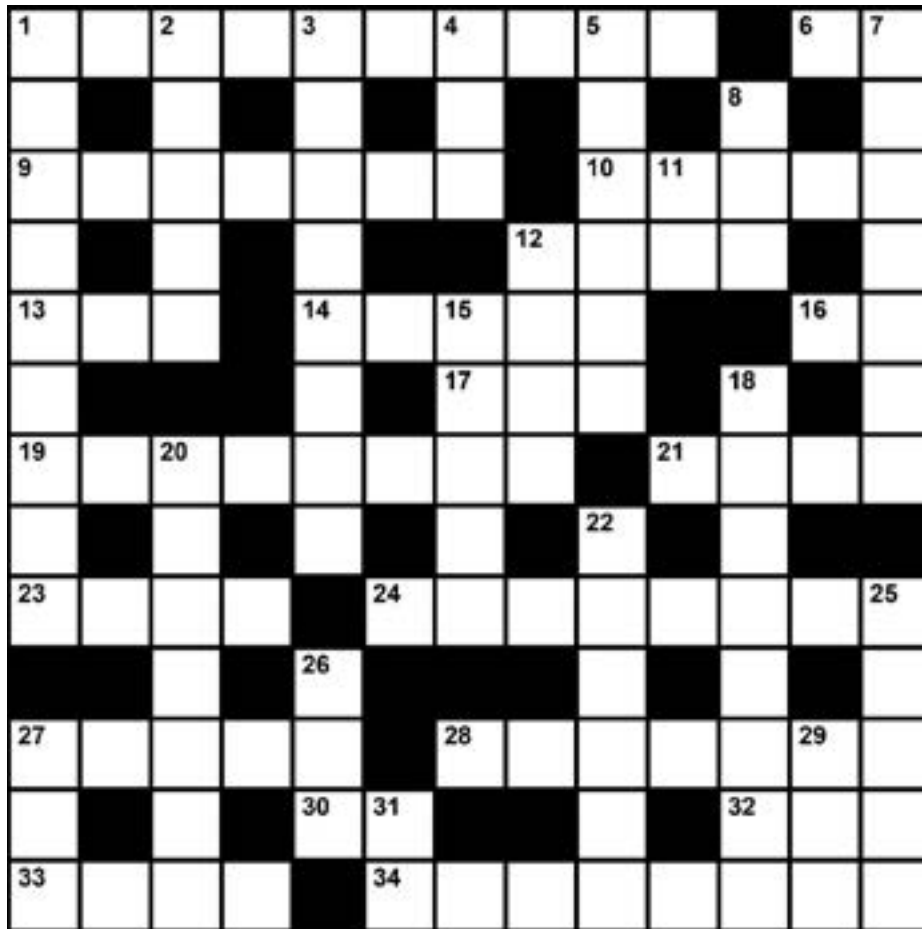
- 15 Summer moth, for short
- 17 Amazing adventure
- 19 Pilotless plane
- 22 Wizard
- 23 Continuously growing list of records linked by cryptography
- 26 Listening equipment
- 28 One of three parts
- 30 Ensuring the time and motion of objects corresponds with others

- being operated simultaneously
- 31 Printer cartridge color

DOWN

- 1 Launching areas
- 2 Tease
- 3 Meter millionths
- 4 Kingdom in the Himalayas
- 5 Ancient
- 6 Iron related
- 7 Shout of approval
- 11 Gain data in a hidden way
- 12 Device with a moving mirror and pentaprism

MUTATES



- 26 Apex
- 27 X-ray unit
- 29 Posting at JFK
- 31 Harvard's state

ACROSS

- 1 The A in AI
- 6 Higher
- 9 Gismos
- 10 ___voltaic
- 12 Element #10
- 13 "Star Trek" rank, abbr.
- 14 Nickel-iron alloy
- 16 Iron symbol
- 17 "___ got it!"
- 19 Pattern for forming a copy
- 21 Part of a larger group
- 23 Watch feature
- 24 It smooths the operation of a

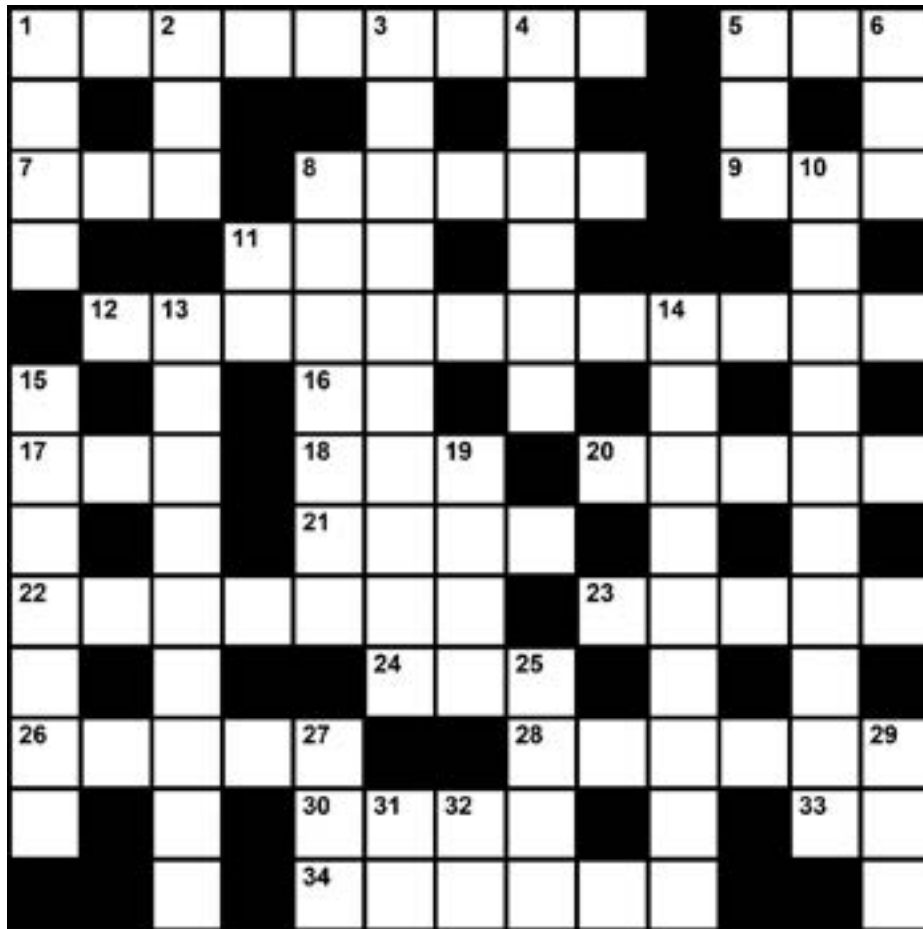
- reciprocating engine
- 27 4:1, e.g.
- 28 Gyrate
- 30 Post meridian
- 32 Sci-fi figures
- 33 Fine powdery material
- 34 Nucleus of a helium atom—2 words

DOWN

- 1 The A in AR
- 2 Daily lists—2 words
- 3 Not rigid
- 4 IV units
- 5 French physicist after whom an

- electric unit is named
- 7 Show on a screen
- 8 Weight measurement
- 11 Santa's laugh sound
- 12 Basilica section
- 15 Crucial
- 18 It changes direct into alternating current
- 20 Changes genetically
- 22 Cause to be in operation, with on
- 25 Causing energy dissipation

BIOMETRIC



- 15 Italian inventor who was a pioneer in wireless communications
- 19 Bag type
- 25 Bygone despot
- 27 Letters on a letter
- 29 Gravity is one
- 31 Expression of comprehension
- 32 Continent (abbr.)

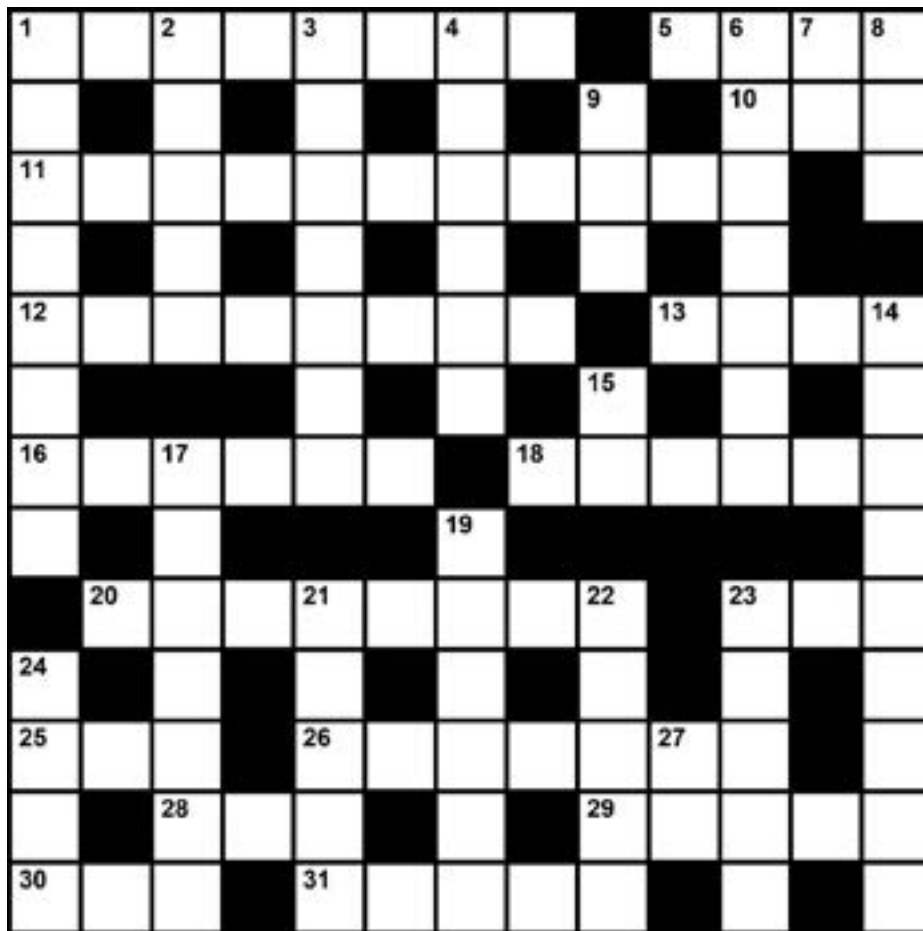
ACROSS

- 1 Electronics that can be worn on the body
- 5 Human simulator
- 7 German cars, abbr.
- 8 ____ recognition
- 9 Obtained
- 11 Sapphire, e.g.
- 12 Verify ID
- 16 Geek dept.
- 17 Police alert
- 18 Superseded by LCD and plasma display
- 20 Radiant
- 21 Sphinx body
- 22 Link
- 23 Swivel

- 24 Rigid
 - 26 Static
 - 28 Type of galaxy
 - 30 Mars Rover mission controllers
 - 33 Baton Rouge state
 - 34 Quantity of unbalanced electricity in a body
- ## DOWN
- 1 Movement up or down or back and forth
 - 2 Essential component to

- how people externally express emotions, abbr.
- 3 Use of physical characteristics for identification
- 4 Electrify
- 5 PC glitch
- 6 Add
- 8 Means of transport
- 10 Having a set of mutually perpendicular axes
- 11 Ford ____
- 13 Inflexible
- 14 Knowledge related

WATSON



- 21 Martian explorer
- 22 Assess
- 23 Electromagnetic wave enhancer
- 24 One part of a program
- 27 Acadia National Park state

ACROSS

- 1 Relating to phone networks
- 5 Exchange
- 10 Mineral suffix
- 11 Ability to make a way into something
- 12 Superficial
- 13 Apple founder
- 16 Directions of activity
- 18 IBM's Jeopardy winner
- 20 Turning on a security system
- 23 Former Russian orbiter

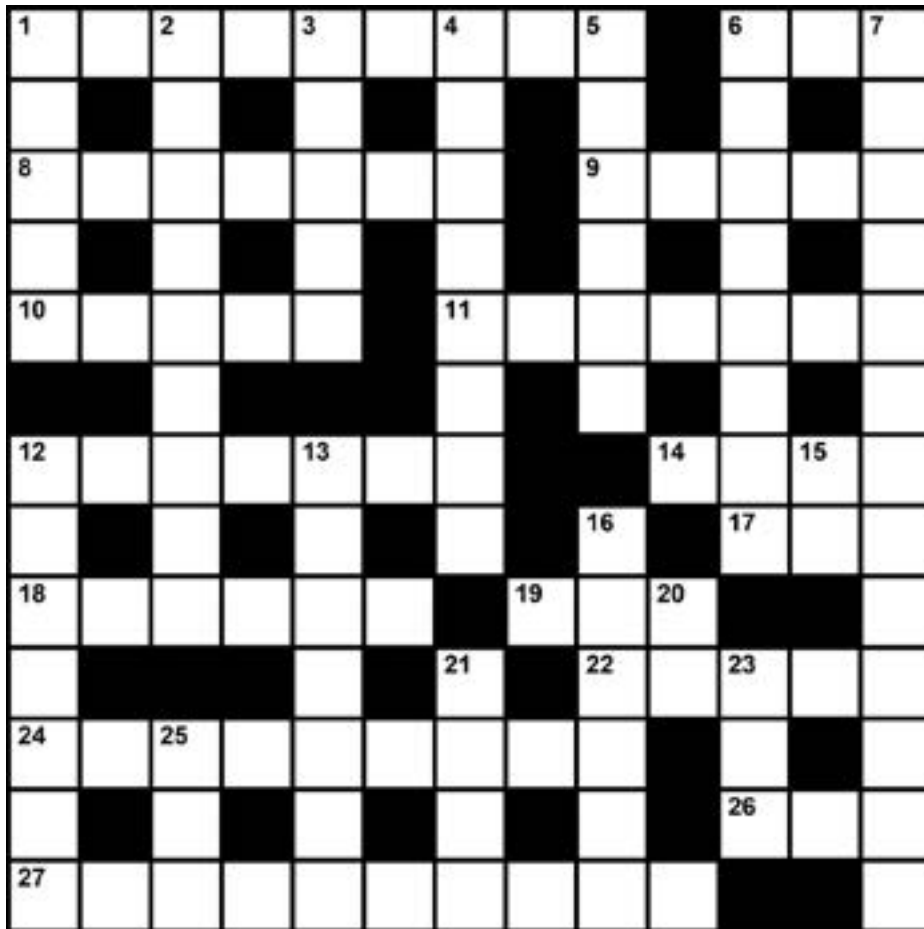
- 25 End
- 26 Empty areas of space
- 28 "Here's the proof!"
- 29 They fly in V formations
- 30 Before
- 31 Scope

DOWN

- 1 Maximum production possible
- 2 Communication connectors
- 3 Favorable economic sign

- 4 _____ numerals
- 6 Microsoft system
- 7 In that location
- 8 Thermoplastic resin
- 9 URL ending for some websites
- 14 The co-motions of two companies creating greater power than from just one of them
- 15 Symbol for calcium
- 17 Astronomical blackout
- 19 Gemstone of many colors

AEROGEL



ACROSS

- 1 Occurrences within a given time period
- 6 Uranus moon named after a Shakespearean queen
- 8 Astronaut's return
- 9 Scientific rather than artistic mode of thought
- 10 Prefix with molecular
- 11 One-celled organisms
- 12 Pain reliever
- 14 Sicilian peak
- 17 Dine

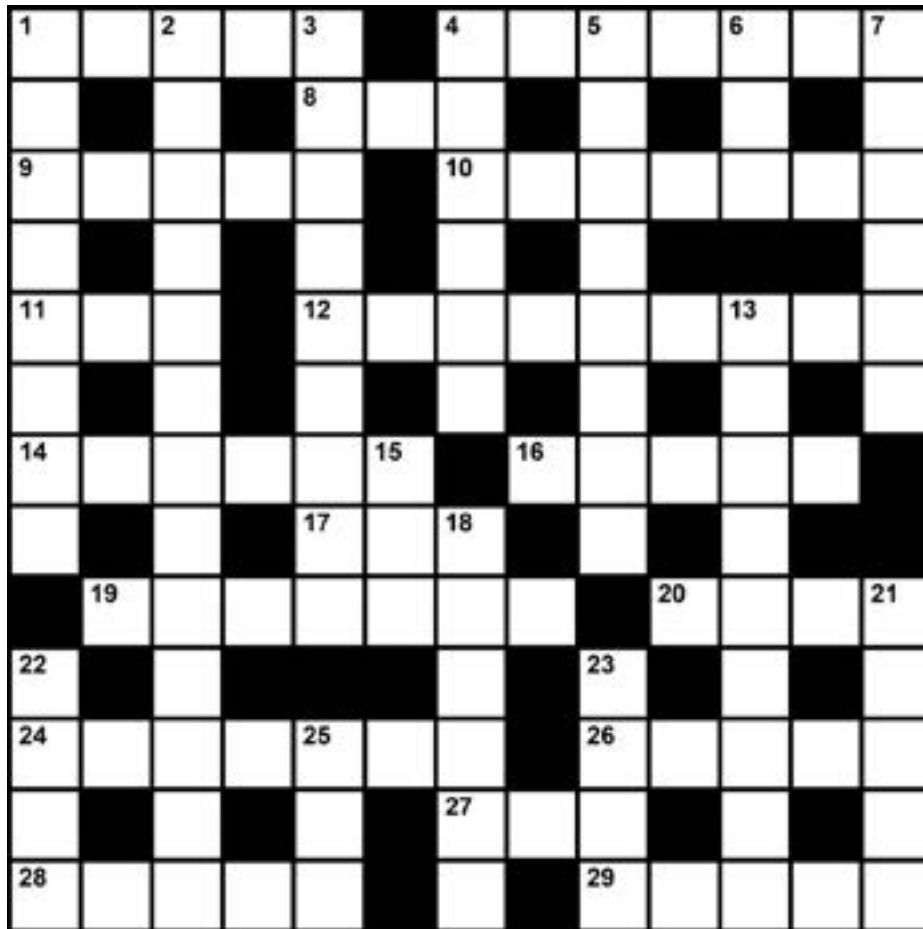
- 18 Puts at 0, maybe
- 19 Vacuum's lack
- 22 Detect, as danger
- 24 Types of gauge bosons
- 26 Pollinator
- 27 Continents, for example

DOWN

- 1 Chain reaction pioneer
- 2 Nucleus orbiters
- 3 Beyond the usual
- 4 Pessimist
- 5 Spectrum color
- 6 Unit of information
- 7 Deflected radiation or

- particles through an angle of 180 degrees
- 12 Insulation used by NASA
- 13 Rare earth metal
- 15 Sodium symbol
- 16 Part of an organism
- 20 Email subject line starter
- 21 Name for mountains on the moon
- 23 Kernel
- 25 ___ Arbor, Michigan

FIRMWARE



ACROSS

- 1 The F in FPGA
- 4 Maliciously breaking into a website or internet system
- 8 Hosp. area
- 9 Mars observer
- 10 First stage of a multistage rocket
- 11 Large conflict
- 12 Gauge
- 14 Scattershot
- 16 Frequency unit
- 17 Kind of tide
- 19 Use again, in an eco-friendly way
- 20 Asteroid ____

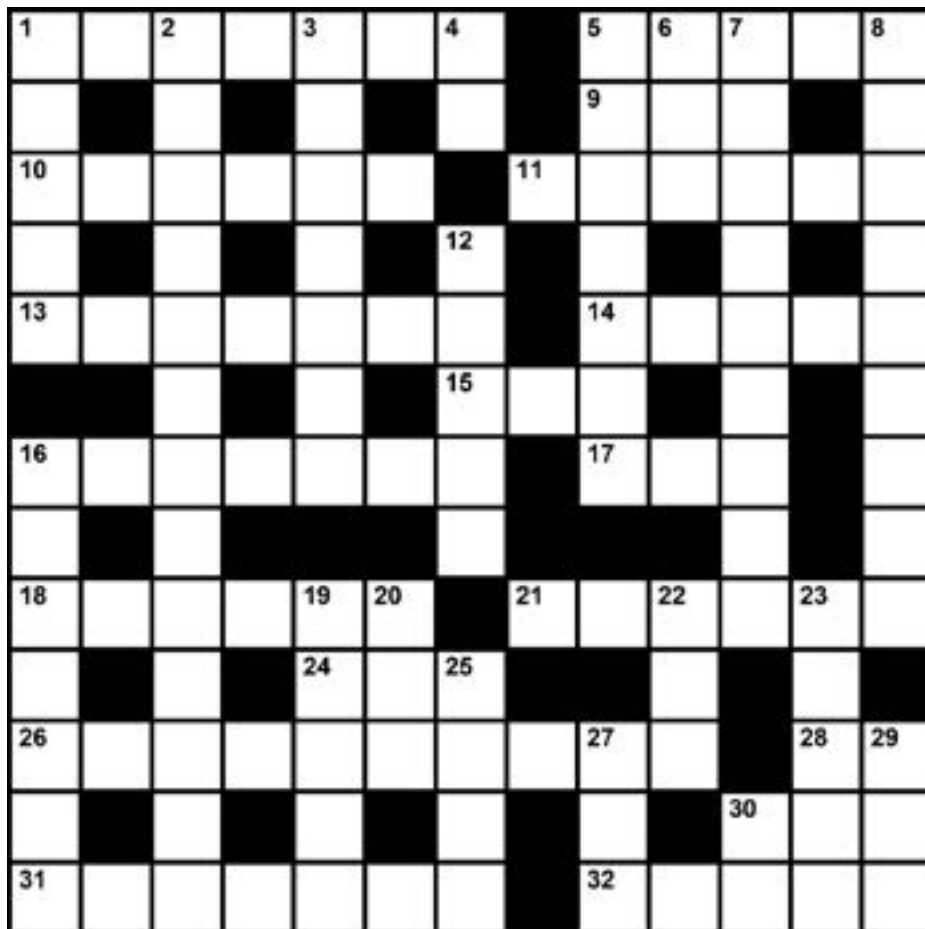
- 24 Security updates that may soon become necessary on hardware
- 26 Light bulb units
- 27 Medical diagnostic procedure
- 28 Firm and reliable
- 29 Narrow stretches of land

DOWN

- 1 Coded instructions that are stored permanently in read-only memory
- 2 Relating to ecological effects

- 3 List of files stored in memory
- 4 Renowned stargazer
- 5 Obstructions
- 6 Network of physical objects that are electronically connected
- 7 Arboretum, e.g.
- 13 Real
- 15 Sound magnifier
- 18 Type of TV
- 21 Assignments
- 22 Android programs, for short
- 23 Clone
- 25 Secreted

QUANTUM



- 25 Diagram with relatives
- 27 Appraise for authenticity
- 29 For every
- 30 ___ work

ACROSS

- 1 _____ key distribution
- 5 Spectroscope part
- 9 Not her
- 10 "The Newton of Electricity"
- 11 Internet subdivision
- 13 Gray or greenish-blue mineral used as a refractory
- 14 Board game
- 15 Certain access code
- 16 Most cryptic
- 17 It leaves a line in the snow

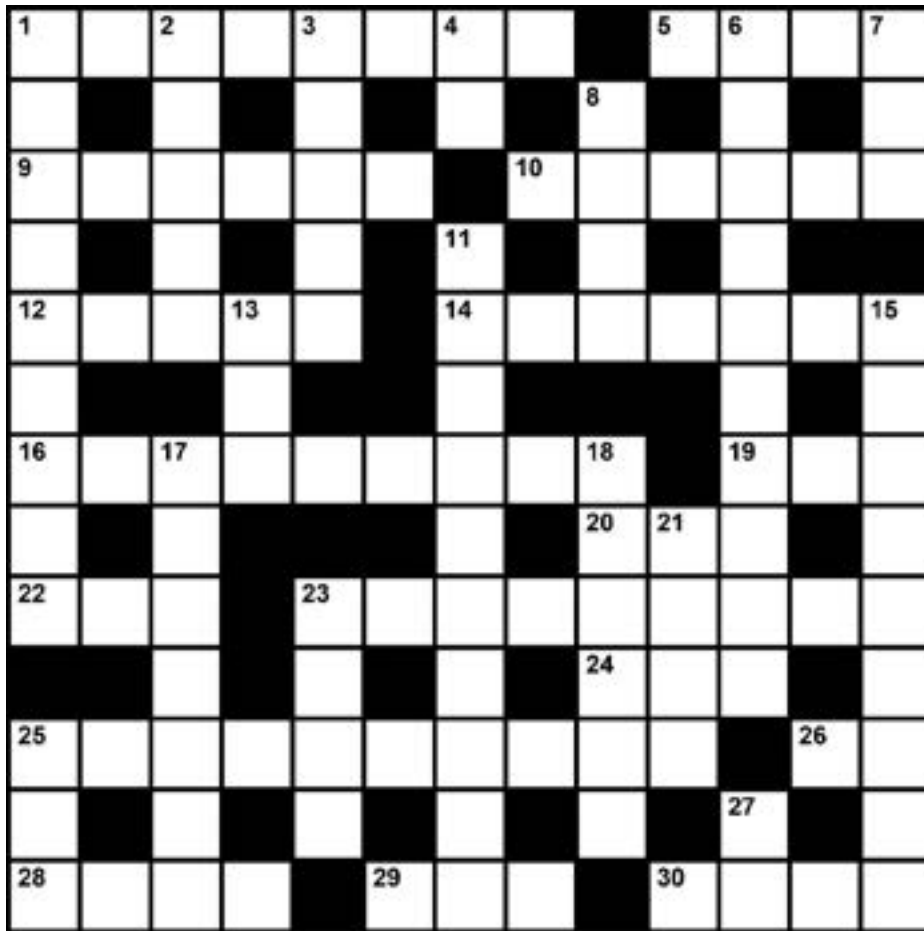
- 18 Compromised computers running on automatic
- 21 ___ Glass EE
- 24 Intersected
- 26 Memory stick, 2-words
- 28 Randomized polynomial time, abbr.
- 30 Geological period
- 31 Rotating shaft
- 32 Strength of a solution

- 2 Closest star system to the sun—2 words
- 3 Rotary engine
- 4 Mountain, for short
- 5 Electromagnetic energy units
- 6 Lip
- 7 Contemplating future creation
- 8 Small
- 12 Profundity
- 16 Argues
- 19 Hammer in
- 20 Innovative "Talks"
- 22 Vein contents
- 23 Humongous

DOWN

- 1 Hypothetical physics particle

MILLIMETER



that use two or more transmitters and receivers to send and receive more data at once
 25 Mesh
 27 ___ beat

ACROSS

- 1 Type of light that could be used to speed up wireless capacity
- 5 Diagnostic test
- 9 Ubiquitous fastener
- 10 Digital image composed of a matrix of dots
- 12 High-maintenance
- 14 Platinum cousin
- 16 Kind of triangle
- 19 Queen in chess, ironically
- 20 Imitate
- 22 Shelf bracket shape

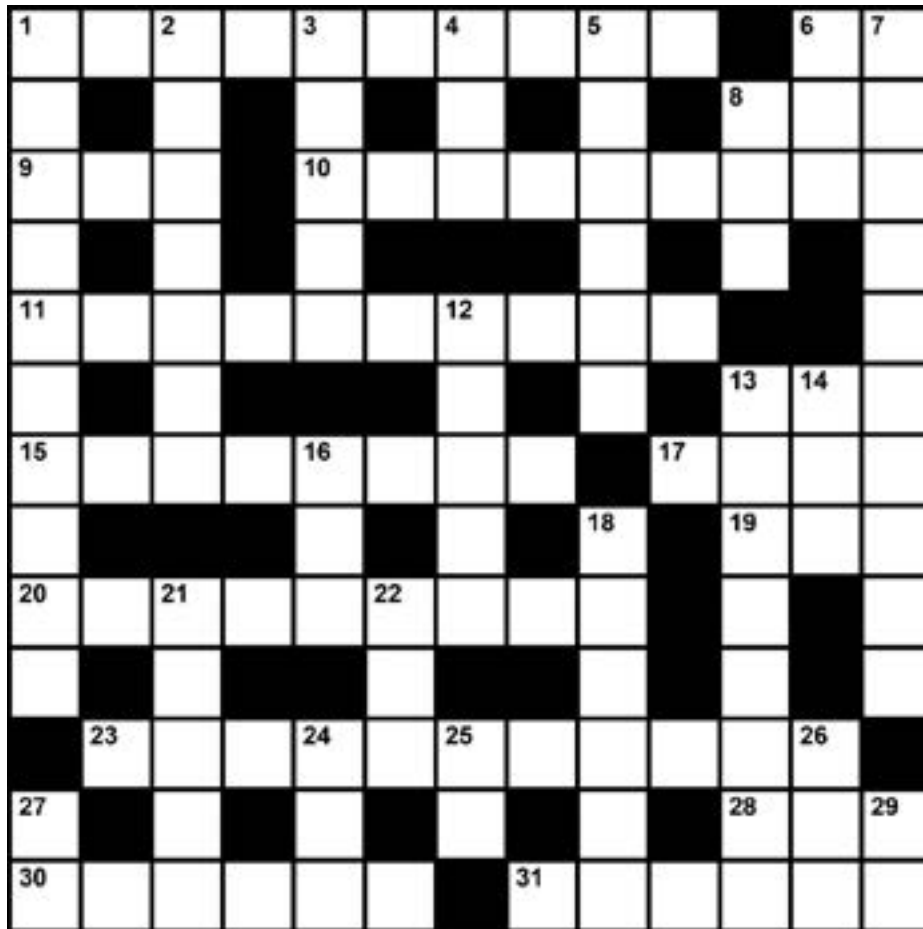
- 23 Thin pliable sheets
- 24 Dynamite
- 25 Micro-millimeters
- 26 ___-lingual
- 28 Function
- 29 Expert
- 30 Cross over

DOWN

- 1 Adept at originality
- 2 ___ positives
- 3 Systematic arrangement of similar objects
- 4 Gentle alien invader
- 6 Contractual engagement
- 7 Power ___

- 8 Small model
- 11 Waves being tested for broadcasting to reduce Wi-Fi's bottleneck
- 13 Windows forerunner
- 15 Take away in equations—2 words
- 17 They are neither squares nor circles
- 18 Preeminent existentialist
- 21 Balance parts
- 23 Term describing wireless systems

PLASMONICS



- 14 Blood-typing system
- 16 Website symbol
- 18 Take back as a product
- 21 Structural supports
- 22 Pass perfectly
- 24 Hydroelectric project
- 25 Nurse, for short
- 26 Weaken
- 27 America
- 29 Tellurium symbol

ACROSS

- 1 Study of the interaction of electromagnetic field and free electrons in a metal
- 6 Distance measurement, for short
- 8 Wall St. debut
- 9 Out of place
- 10 Like an 8-sided shape
- 11 Trillionth of a second
- 13 Little bit
- 15 Hid
- 17 Six-sided shape

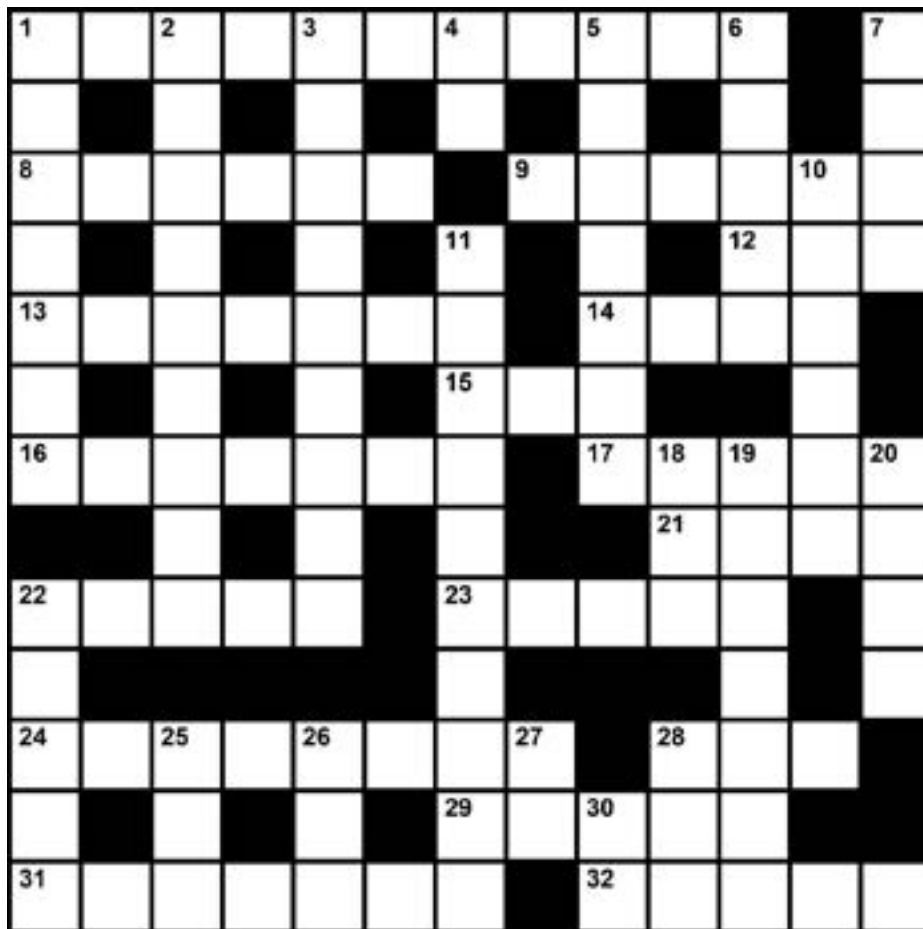
- 19 ___-profit
- 20 Throw out of equilibrium
- 23 Types of forces that are distant-dependent interactions between atoms and molecules—3 words
- 28 Do brunch
- 30 "Open ___!"
- 31 It's drawn across snow

DOWN

- 1 Black _____, material now being tested

- in switching technology
- 2 Advances evidence for
- 3 Particles discovered by Carl Anderson in 1936
- 4 Denial word
- 5 Effective, as an argument
- 6 Accountant
- 7 Metal used in steel alloys
- 8 Sign
- 12 Scrub
- 13 Prepared for the Hyperloop perhaps

SPINTRONICS



- 26 Big boat that was 300 cubits long
- 27 Water purification technology, for short
- 28 Exist
- 30 Evening time

ACROSS

- 1 Field in which electron spin is manipulated to create a desired result
- 8 Company claiming to have the best computing platform for smart cars
- 9 Force that produces strain on an object
- 12 Permit
- 13 Copy
- 14 ____-wing door
- 15 Form of H₂O
- 16 Communications

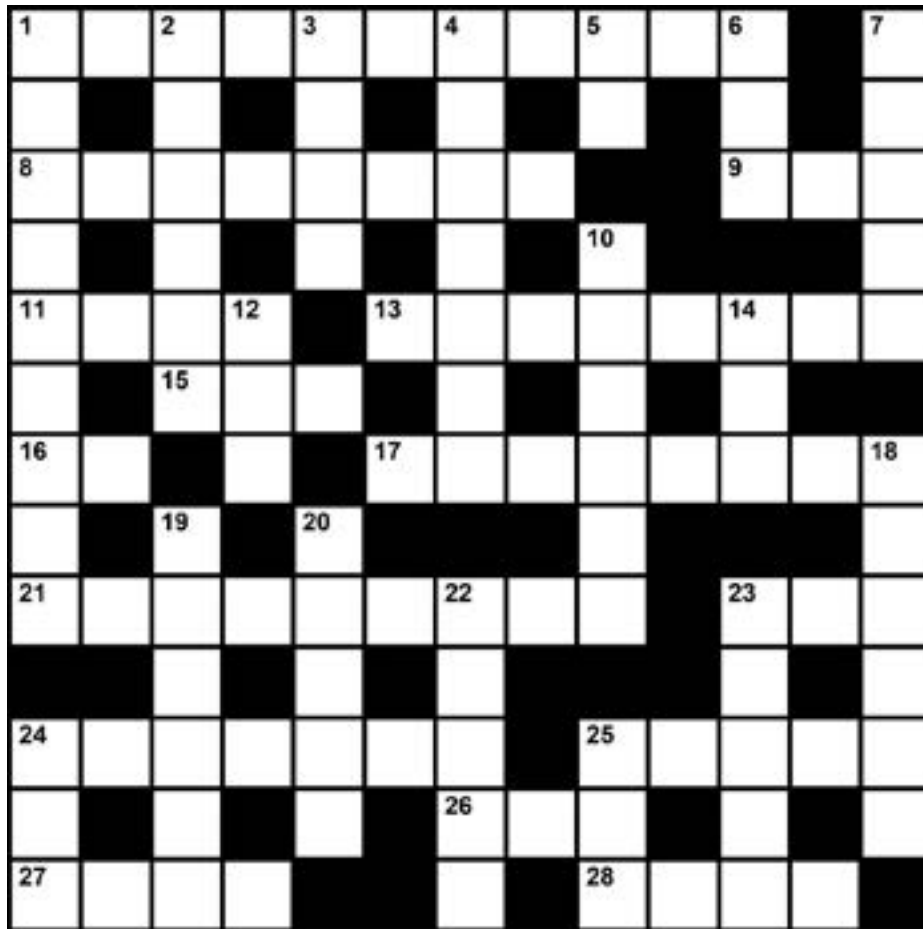
DOWN

- 17 Circular measurements
- 21 Colored
- 22 Sit in on
- 23 Continental divide?
- 24 Mechanism that puts an object into automatic action
- 28 Electrical power measurement
- 29 Maker of action cameras
- 31 Ready to use on delivery
- 32 Subatomic particle

DOWN

- 1 Watch's ancestor
- 2 Begun
- 3 Bismuth can form ____ compounds
- 4 Salem state
- 5 Complete number
- 6 Subject for an osmologist
- 7 Become corroded
- 10 Pic that's often posted
- 11 Earthquake study
- 18 Pascal based language
- 19 Generators
- 20 Inventor's spark
- 22 Customize
- 25 Windswept hill

BLACKOUT



ACROSS

- 1 Relating to a system that maintains its own viability
- 8 Light strong metal
- 9 "Wow!"
- 11 British noble
- 13 Set of regulations
- 15 Veto
- 16 Popular
- 17 Power failure
- 21 Financial considerations
- 23 Engine type
- 24 Nvidia's platform for smart cars
- 25 Five, in combinations

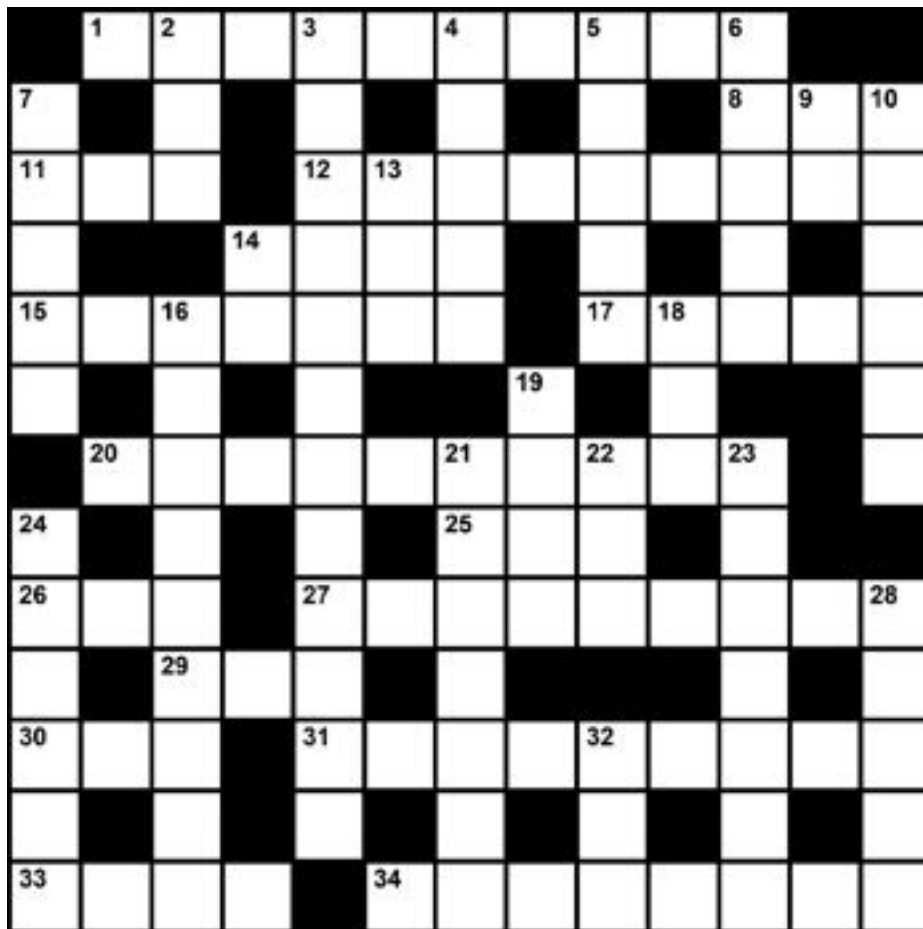
- 26 Find a purpose for
- 27 Colorless organic thermoplastic polymer, acronym
- 28 Increase

DOWN

- 1 Orbiter around earth
- 2 Second largest planet
- 3 Optimally rated
- 4 Gear position
- 5 Alongside
- 6 Heart reading, briefly
- 7 User interface for access to

- an operating system's services
- 10 Arranges in piles
- 12 Switch to low beam
- 14 V.I.P. in a corp.
- 18 Group or set of 4
- 19 Look for information
- 20 Increase
- 22 Problem
- 23 The first international standard for underwater communications
- 24 Explosive sound
- 25 Part of a rate of speed

NEBULAE



ACROSS

- 1 Mechanical assistance to doctors and surgeons, goes with 3 down
 8 Increase, with "up"
 11 Unbroken series
 12 IBM's one million neuron brain inspired processor— 2 words
 14 Telescope part
 15 Eskimo and Helix, for example
 17 Film units
 20 Type of storage— 2 words

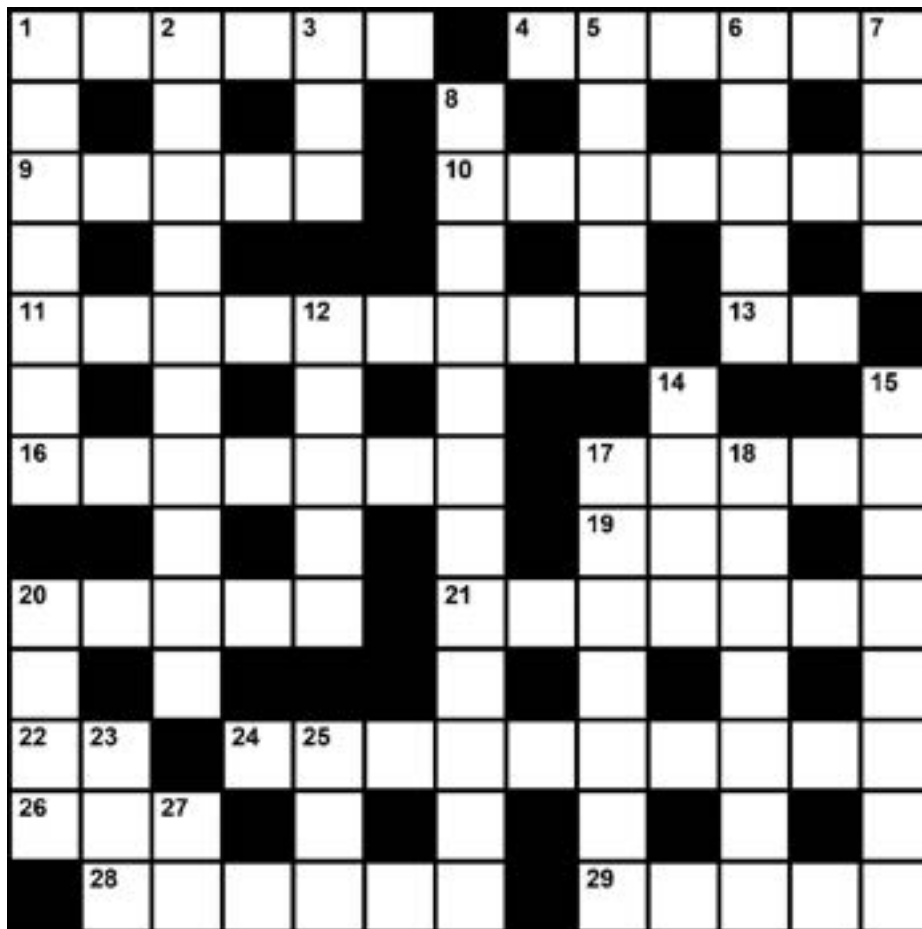
- 25 Identify
 26 Before
 27 "Green"researcher
 29 Hamilton bill
 30 Board member, abbr.
 31 Result of perception and reasoning
 33 It holds servers
 34 Transparency

DOWN

- 2 Headed up
 3 See 1 across
 4 Currently employed
 5 Inside
 6 Supersized

- 7 Construction equipment
 9 Mountain, for short
 10 Moon stages
 13 Part of the genetic code
 14 Atomic number 71
 16 Using fingerprints for ID, e.g.
 18 911 responder
 19 List-ending abbr.
 21 Makeshift
 22 Time long past
 23 Skyscraper, e.g.
 24 Searching computer program
 28 Hues
 32 Place to stay

CAPTCHA



- 12 Security problems
- 14 Friends
- 15 Deep-six
- 17 Play _____, fall behind on work
- 18 Challenge question
- 20 Have on
- 23 Unc's kid
- 25 Activate as a weapon
- 27 Madison's state

ACROSS

- 1 Mathematical computing pioneer, subject of "The Imitation Game"
- 4 Old time calculator
- 9 Building addition
- 10 Meteorological connections
- 11 Result of perception and learning
- 13 Atomic number 73
- 16 It's input and later processed— 2 words
- 17 It's set aside for buffer storage

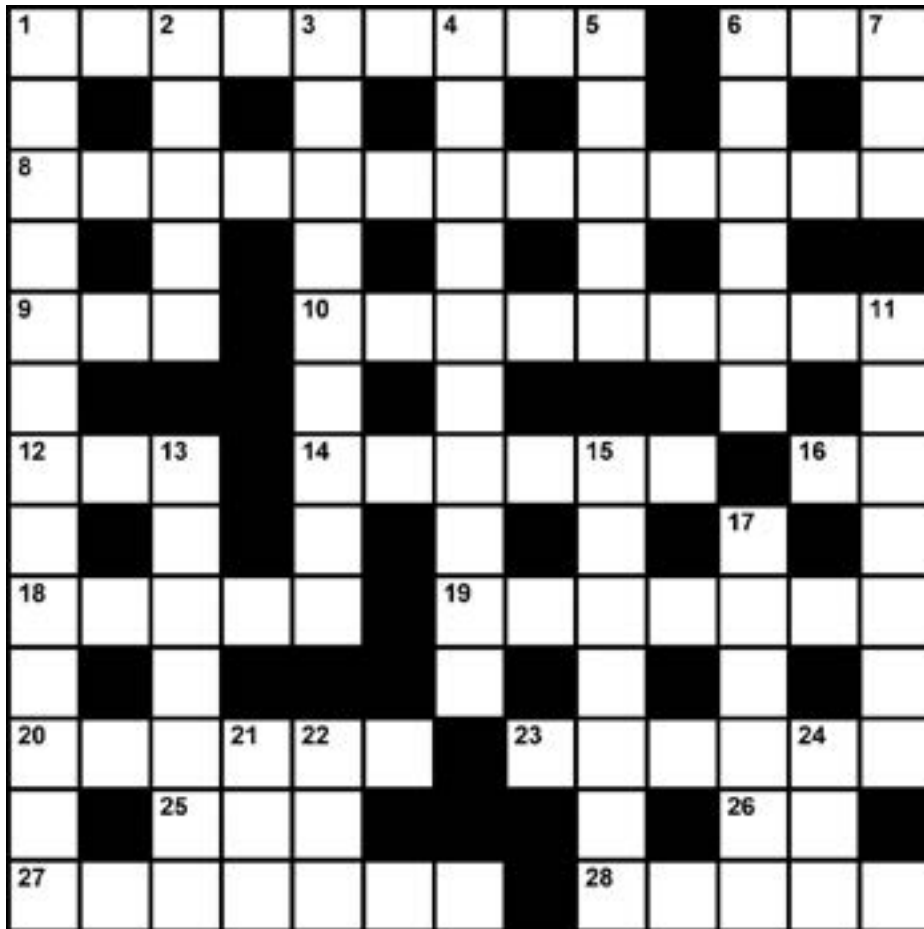
- 19 According to, 2 words
- 20 Metal conductors
- 21 Wireless access point
- 22 Temperature controller
- 24 Postponements of a kind
- 26 Excel feature
- 28 Company working on an IoT earthquake warning network
- 29 Easily seen

DOWN

- 1 Chief designer of the famous

- Xerox Parc Alto computer, Chuck _____
- 2 Malicious threatening software
- 3 Give a thumbs-down to
- 5 Ecological community
- 6 Graphical representation of data
- 7 Method of doing something, abbr.
- 8 They produce a form of renewable energy

BROADBAND



ACROSS

- 1 Ensure an accurate reading of
- 6 Spark plug measurement
- 8 Property of uranium, e.g.
- 9 Be mistaken
- 10 They have a subduing effect
- 12 Computer chief, abbr.
- 14 Closely related
- 16 Gold symbol
- 18 Set the volume to zero
- 19 Cylindrical
- 20 Computer network device

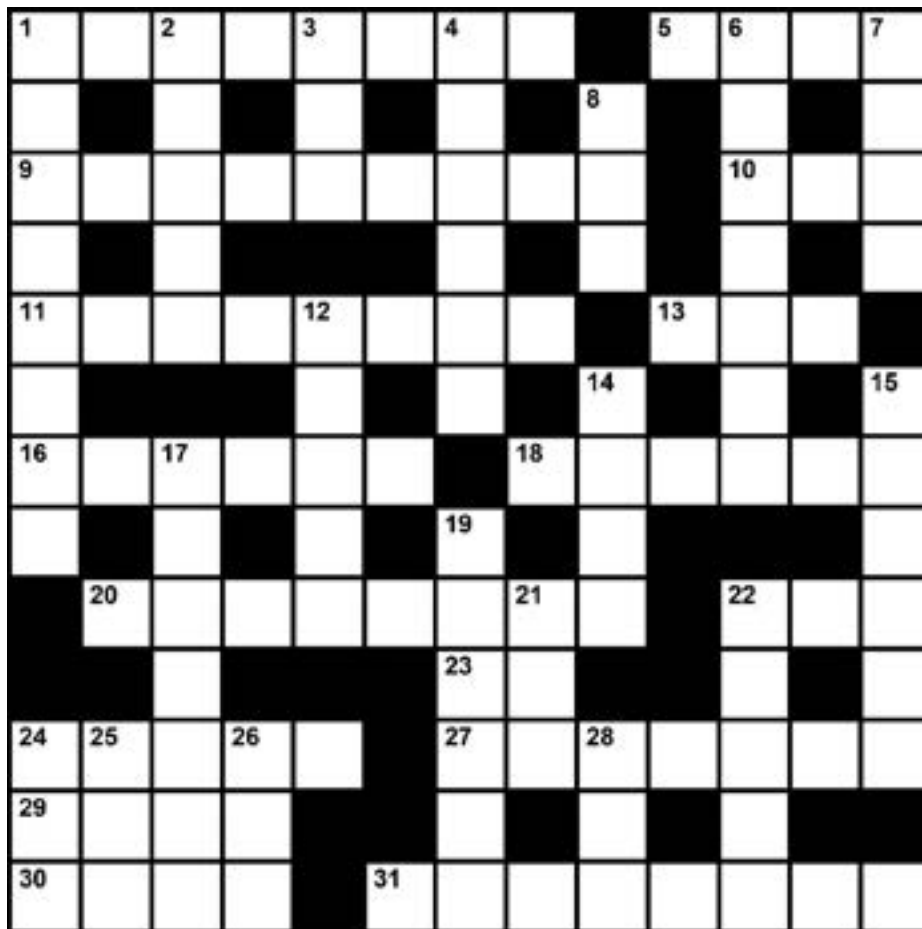
- 23 They have started to deliver packages for Amazon
- 25 Best
- 26 Electron volt, for short
- 27 Lengthen in duration
- 28 Web promotion resources

DOWN

- 1 MIT's system for enabling smart phones to see round corners
- 2 Technology being used in self driving cars

- 3 Fiber optic transmission, e.g.
- 4 Amass
- 5 Of the highest class
- 6 The G in AGVs
- 7 Use a crowbar
- 11 Geometric shapes
- 13 Productions
- 15 Begins
- 17 Mars or Jupiter
- 21 Add
- 22 Environmental controller
- 24 Preholiday night

STRENGTH



- 25 One billion years, geologically
- 26 ___-Mex cuisine
- 28 Second-smallest U.S. state

ACROSS

- 1 Corners' connector
- 5 Part of an Einstein equation
- 9 Electromagnetic radiation measurements
- 10 Thousand, in slang
- 11 Like Mendeleev's table
- 13 Watson's creator
- 16 Recover from a crash?
- 18 Scientists from this nation invented a remote controlled mechanical arm for space missions

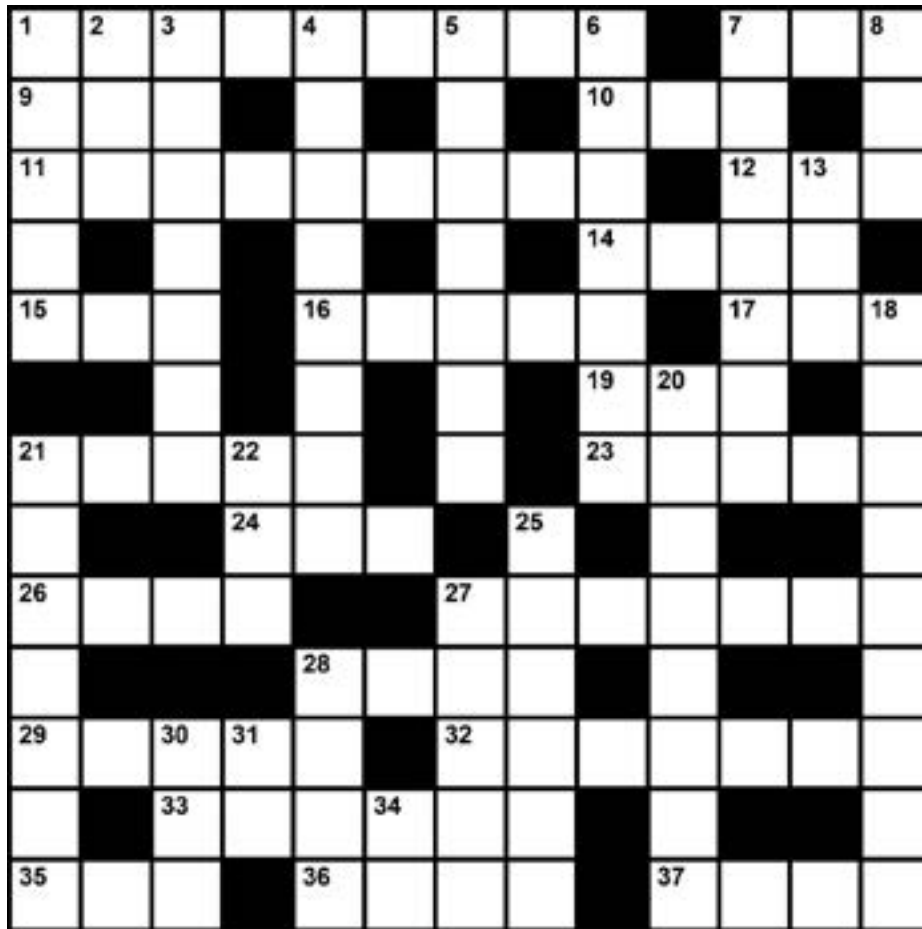
- 20 Physical power
- 22 Noted architect
- 23 Reject word
- 24 Gear features
- 27 Research aids
- 29 Had on
- 30 Chalcedony with black and white bands
- 31 Like some phones

DOWN

- 1 Group migration
- 2 Type of bit
- 3 Published
- 4 Type of power or clock
- 6 School course recommended

- 7 Work detail
- 8 Environmental suffix
- 12 Absorber of ultraviolet radiation
- 14 Trajectory
- 15 Ships' cranes
- 17 Power source
- 19 Set fire to
- 21 Vehicle weight measure
- 22 Dot on a computer screen
- 24 Smallest prime number

SKETCHPAD



- object" for early 3D modeling
- 8 Meta_____
- 13 ___ hunch, 2 words
- 18 Particles that are positively charged
- 20 Study of whales and dolphins
- 21 River spans
- 22 Cape ____, Mass.
- 25 3-D figures
- 27 Subatomic particle
- 28 Accomplishment
- 30 "BBC World Service" ainer
- 31 That is, abbr.
- 34 Turin's river

ACROSS

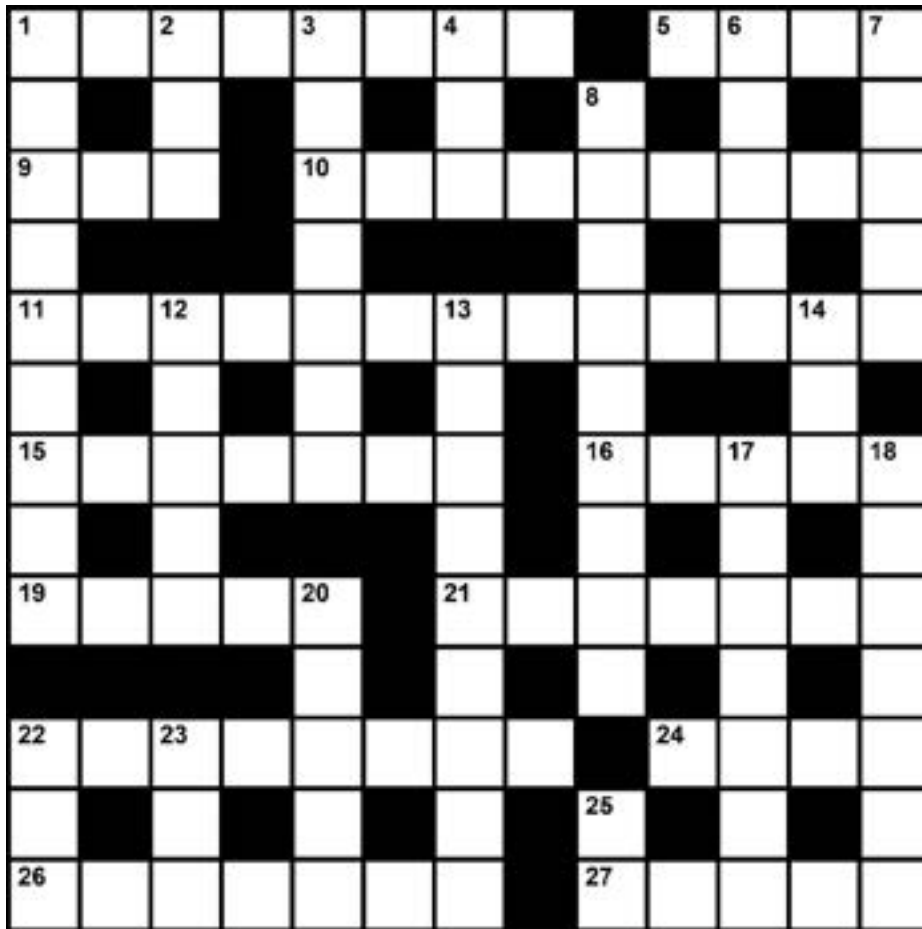
- 1 Ivan Sutherland's development, viewed as the first computer aided design program
- 7 Engineering university
- 9 Snap shot
- 10 Glacier material
- 11 Connections between electrical grids
- 12 Flight record
- 14 Hurting
- 15 Historic period
- 16 Tag
- 17 Request money from
- 19 Law
- 21 Test versions
- 23 Age measurement
- 24 Decryption org.
- 26 Material in elinvar
- 27 Yamaha's automated bike rider
- 28 Energy source
- 29 Groundbreaking 1963 computer research project
- 32 Windstorm
- 33 Mendel subject— 2 words

- 35 Isaac Newton's title
- 36 Weight measurements
- 37 Goes off course

DOWN

- 1 Sudden power usage surge
- 2 Relatives
- 3 Take out
- 4 Without electrical wires
- 5 Easily shaped
- 6 Show
- 7 Teapot that became a "test

VANADIUM



ACROSS

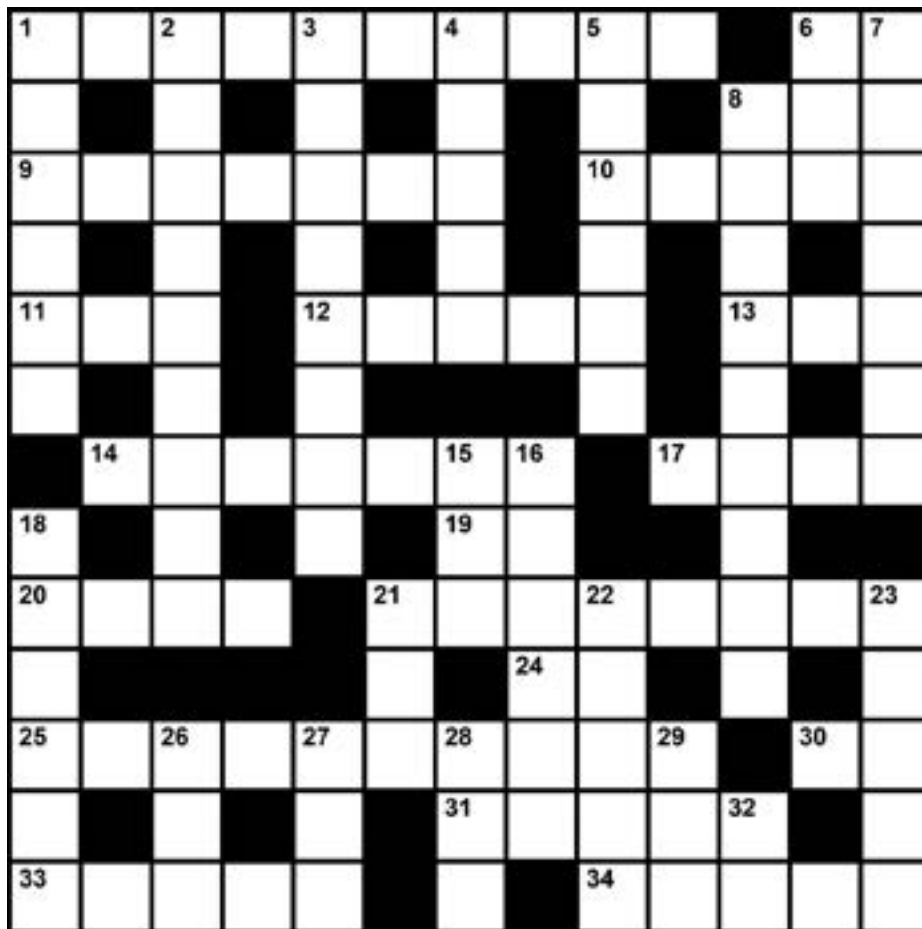
- 1 The V in VRFB
- 5 Piece of concrete
- 9 Less than normal
- 10 Trace of earlier activity
- 11 Elementary subatomic particles
- 15 Check out
- 16 They make up a whole
- 19 Precise
- 21 Ground water source
- 22 Thin, pliable sheet
- 24 It's true
- 26 Recorded, in a way
- 27 Statistic

DOWN

- 1 Treat rubber
- 2 Innovative
- 3 The D in DARPA
- 4 Single in Spanish
- 6 Type of battery
- 7 Computer units
- 8 Device in an internal combustion engine—2 words
- 12 Powerwall producers
- 13 Not educated
- 14 No longer popular
- 17 Change the direction of, as light
- 18 Layer of rock

- 20 Sports-car engine
- 22 Channel with VJs
- 23 Centered
- 25 Data storage device

SIMON



- 22 Lead or zinc
- 23 Looking at
- 26 Outer edge
- 27 Source of natural energy
- 28 Driller's quest
- 29 Farmer's stack
- 32 Unit of radioactivity

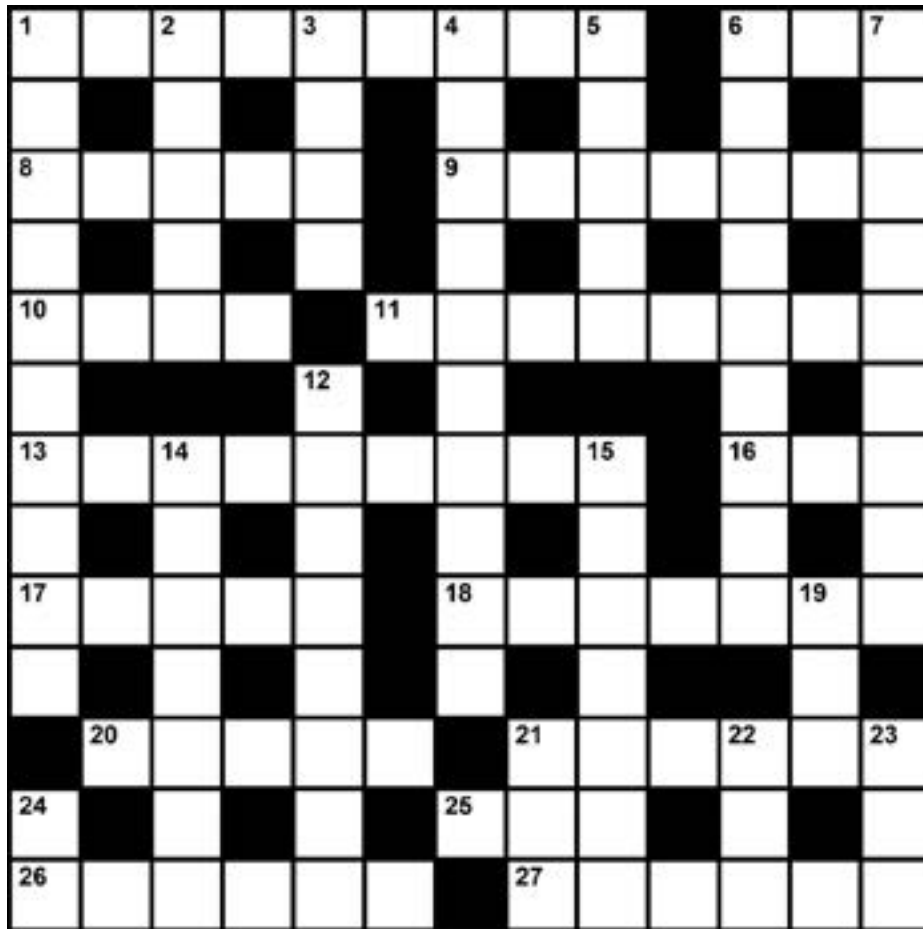
ACROSS

- 1 Significant 1947-8 invention
- 6 Twofold
- 8 Axis with a short shaft
- 9 Domed building
- 10 John Fleming's invention
- 11 Secrecy agreement
- 12 Like helium
- 13 Even so
- 14 Discovered a law for electrostatic charges
- 17 Exploding star
- 19 Distance from the sun to the galactic center in astronomy
- 20 Fluid tube
- 21 Engineers that program microprocessors
- 24 ___ Doc Smith, of Sci-fi
- 25 He made the first public demonstration of an electronic television
- 30 50th state
- 31 Newton's first name
- 33 Ohm's middle name
- 34 Placed

DOWN

- 1 Church-_____ thesis
- 2 They might activate a robot
- 3 Old time-keepers
- 4 It shows relative magnitude
- 5v Something out of place
- 6 Nod, maybe
- 7 Tendency to remain static
- 8 Many-sided
- 15 Medical diagnostic procedure
- 16 Drill bits
- 18 Columns of light
- 21 Limited number

BOLTZMANN



ACROSS

- 1 Thermodynamics equation scientist
 6 Screened
 8 Unit of magnetic flux
 9 Formulator of the law of volumes
 10 Minus
 11 Cause to go into solution
 13 Developing and arranged serially and predictably
 16 Explosive
 17 Egg-shaped
 18 Guaranteed

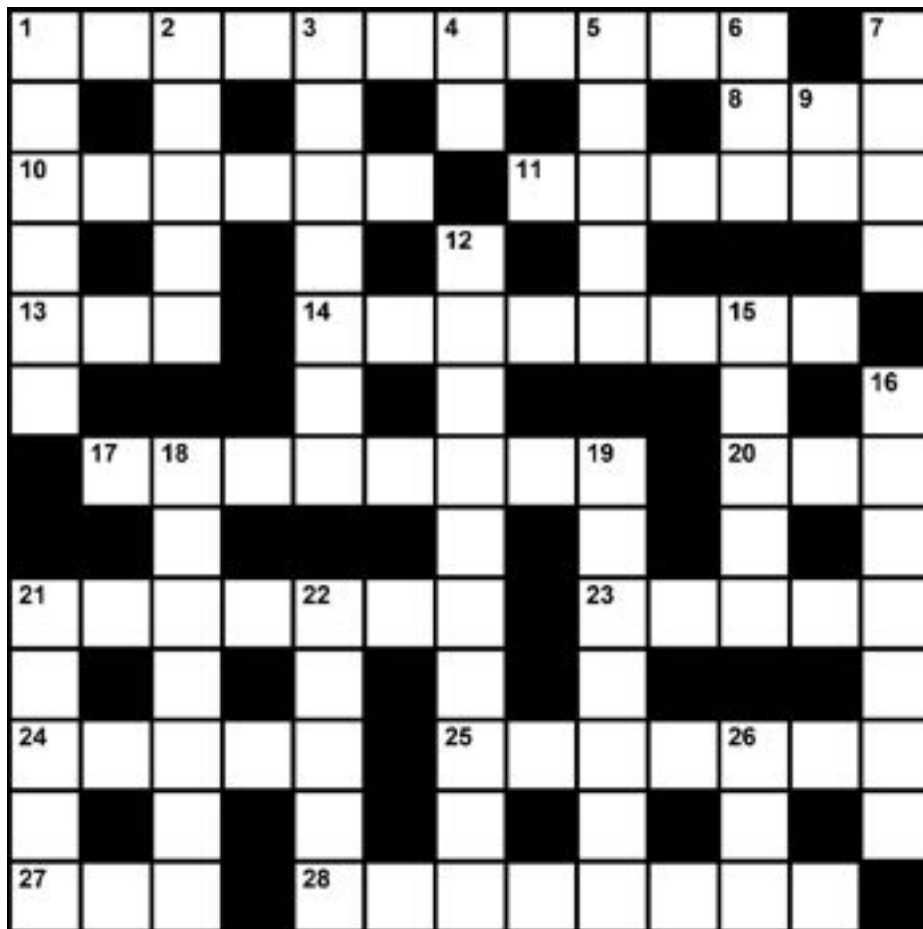
- 20 Concrete reinforcement material
 21 X3
 25 Biz ____
 26 Surmise
 27 Discover

DOWN

- 1 The ____ transformation
 2 Pasteur's first name
 3 Citrus flavoring
 4 Greek noted for his work in hydrostatics

- 5 Approaches
 6 Volume amount, 2 words
 7 Analyzed closely
 12 It produces renewable energy
 14 Chemically related compounds
 15 Save for future use
 19 Home extension
 21 Cutting-edge talks brand
 22 Important pollinator
 23 "Guinness Book" suffix
 24 Leonardo's middle name

OERSTED



ACROSS

- 1 Practical systems
- 8 Brink
- 10 Remove sharp edges
- 11 Highest point
- 13 Weight abbr.
- 14 Primary ore used in steel production
- 17 One-fourth of a circle
- 20 Pass a test easily
- 21 Caused by earth motions
- 23 Word before space and limits
- 24 Empty spaces

- 25 Little stones
- 27 Happy cry
- 28 Stellar

DOWN

- 1 Hypothetical descriptions of complex processes
- 2 Cylinders
- 3 Aluminum discoverer
- 4 Midwestern state
- 5 Continental divider
- 6 Even so
- 7 Part of a cell-phone service plan

- 9 Volumetric Efficiency, for short
- 12 It's used for temporary storage, in computing
- 15 Distinguishing characteristic
- 16 Anticipating a decline
- 18 Electric company, e.g.
- 19 Strip of icons
- 21 Smart
- 22 Speculates
- 26 Grassland

ANSWER KEY

Nanochip, Page 3

1	R	O	P	E	M	E	M	O	R	Y		7	C	D	
	O		R		O			9	S	A	E			N	
10	O	X	I	D	I	Z	E		12	D	A	R	P	A	
	M		N		S		L		A		A				
14	B	E	T		15	T	H	E	O	R	E	T	I	C	16
	A		E			V					C			A	
	17	O	R	B		18	N	A	N	O	19	C	H	I	P
20	A	R				T			21	H	E			E	
22	V	E	H	I	C	L	E		25	F	I	T		R	
	I		A		A			26	T	E	N				
27	A	L	A	N	K	A	Y		28	R	A	P	I	D	30
	T		R		E					M	H			I	
31	E	S	P			32	D	A	R	W	I	N	I	A	N

Stormram, Page 4

1	L	I	G	O		3	N	E	U	T	R	O	N	6						
	O		A		7	B	I	O		F		A		I						
8	G	A	M	M	A		9	O	V	O	I	D	A	L						
		B		R		N				11	A	G	E							
12	S	K	I	D		14	Z	E	E	15	A	E	R	O						
	T		16	T	I	M	E			E				18						
19	O	R		20	P	R	E	C	21	U	R	S	22	O	R	S				
	R		23	S					P	A	W				M					
24	M	A	Y		25	H	O	U	S	T	O	N			O					
	R		N		O				E						S					
26	A	N	D	Y	W	E	27	I	R		28	M	29	30	I					
	M		E		T		L		31	S		32	I	O	N					
									33	M	O	O	N	L	A	N	D	I	N	G

Deep Mind, Page 5

1	D	E	E	P	M	I	N	D		5	H	E	L	P	7	
	E		R		O		O		8	S		V		O		
9	C	A	R	B	O	N		10	O	P	T	I	C	S		
	R		A		R					E	D			I		
11	Y	E	T		12	E	F	F	13	I	C	I	E	N	T	
	P		I												N	
14	T	E	C	H	15	N	O	L	O	G	I	C	17	A	L	18
	E				O		E			E		19	E	G	O	
20	D	A	Y	21	T	R	A	D	22	I	N	G		23	A	W
			A		Z				X		24	P	I			
25	N	A	N	O	T	U	B	E		26	27	Z	I	N	C	29
	T		K			30	R	I	B					O		G
31	H	O	S	E		E		32	B	I	O	N	D	I		

Inertia, Page 6

1	I	N	F	E	R	O	M	E	T	R	Y		6	R		
	N		L		E		O		R			7	C	A		
8	S	P	O	O	F		9	U	R	A	N	I	U	M		
	T	W		R		N		C		N						
11	A	B	S		12	A	N	T	M	I	N	E	R			
	L			C				N						R		
13	L	I	G	H	T	N	I	N	15	G		16	T	A	G	17
	E		E		O		N						I		A	
18	D	Y	N	A	M	I	C		19	X	R	A	20	Y	S	
		O		E		21	A	P	E		E					
22	R	E	M	O	T	E	S		23	N	O	V	A			
	E		E		E		E		O		I	25	A			
26	V	I	S	O	R	S		27	U	N	M	A	S	K		

Solenoid, Page 7



Blockchain, Page 8



Mutates, Page 9



Biometric, Page 10



Watson, Page 11



Aerogel, Page 12



Firmware, Page 13



Quantum, Page 14



Millimeter, Page 15



Plasmonics, Page 16



Spintronics, Page 17



Blackout, Page 18



Nebulae, Page 19



Captcha, Page 20



Broadband, Page 21



Strength, Page 22



Sketchpad, Page 23

1	S	K	E	T	C	H	P	A	D		7	M	I	T			
9	P	I	X		O		L		10	I	C	E		A			
11	I	N	T	E	R	T	I	E	S		12	L	O	G			
	K		R		D		A		14	P	A	I	N				
15	E	R	A		16	L	A	B	E	L		17	T	A	P		
			C			E		L		19	A	C	T		O		
21	B	E	T		22	A	S		E		23	Y	E	A	R	S	
	R				24	N	S	A		25	S		T			I	
26	I	R	O	N					27	M	O	T	O	B	O	T	
	D					28	F	U	E	L						R	
29	G	E	N	I	E				32	S	I	R	O	C	C	O	
	E		33	P	E	A		34	P	O	D		G			N	
35	S	I	R			36	T	O	N	S			37	Y	A	W	S

Vanadium, Page 24

1	V	A	N	A	D	I	U	M		5	S	L	A	B		
	U		E		E		N		6	S		I		Y		
9	L	O	W			10	F	O	O	T	P	R	I	N	T	
	C				E					A	O		E			
11	A	N	T	I	N	E	U	T	R	I	N	O	S			
	N		E		S		N			K			U			
15	I	N	S	P	E	C	T			16	P	A	R	T	S	
	Z		L					R		L	E		T			
19	E	X	A	C	T			21	A	Q	U	I	F	E	R	
						U			I	G		R		A		
22	M	E	M	B	R	A	N	E		24	F	A	C	T		
	T		I		B		E		25	C		C		U		
26	V	I	D	E	O	E	D			27	D	A	T	U	M	

Simon, Page 25

1	T	R	A	N	S	I	S	T	O	R		6	B	I		
	U		C		U		C		D		5	P	I	N		
9	R	O	T	U	N	D	A		10	D	I	O	D	E		
	I		U		D		L		I		L		R			
11	N	D	A		12	I	N	E	R	T		13	Y	E	T	
	G		T		A				Y		G		I			
		14	C	O	U	L	O	15	M	16		17	N	O	V	A
18	S		R		S			19	R	O						
20	H	O	S	E			21	F	I	R	M	W	A	R	E	23
	A					E		24	E		E		L		Y	
25	F	A	R	N	S	W	O	R	T	H		30	H	I		
	T		I		U		31	I	S	A	A	32	C		N	
33	S	I	M	O	N			L		34	L	Y	I	N	G	

Boltzmann, Page 26

1	B	O	L	T	Z	M	A	N	N		6	H	I	D		
	O		O		E		R		E		A		I			
8	G	A	U	S	S			9	C	H	A	R	L	E	S	
	O		I		T		H		R		F		S			
10	L	E	S	S			11	D	I	S	S	O	L	V	E	
	I					12	W		M			I		C		
13	U	N	I	L	I	N	E	A	R		16	T	N	T		
	B		S		N				D		E		E		E	
17	O	V	O	I	D			18	E	N	S	U	R	E	D	
	V		M		F			S		E		L				
		20	R	E	B	A	R		21	T	R	E	B	L	E	23
24	D		R		R			25	D	E	V		E		S	
26	A	S	S	U	M	E			27	D	E	T	E	C	T	

Oersted, Page 27





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