CHEMISTRY COLORING BOOK

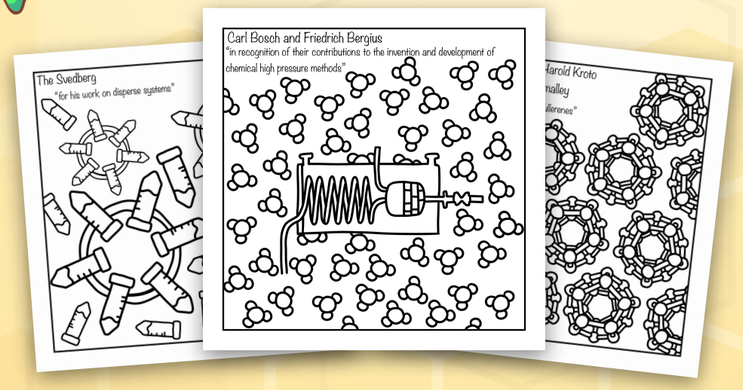
STEP INTO THE COLORFUL HISTORY OF CHEMISTRY, ONE NOBEL PRIZE AT A TIME!

From Marie Curie's glowing discoveries to Linus Pauling's molecular masterpieces, this hand-drawn coloring book takes you on a relaxing journey through all the most groundbreaking scientific achievements ever honored.

Each page captures the essence of a Nobel-winning discovery: molecules, instruments, and processes reimagined for creativity and curiosity. There's no right or wrong way to color, only a chance to slow down, learn, and be inspired by the brilliant minds who changed our world.

Perfect for students, teachers, science lovers, or anyone who believes chemistry is both an art and an adventure.

Grab your pencils, and color the story of science



CHEMISTRY COLORING BOOK: NOBELS IN CHEMISTRY

CHEMISTRY COLORING BOOK

NOBELS IN CHEMISTRY (1901 -2025)

Chemistry coloring book: Nobels in chemistry 1901-2025

Welcome to this very special coloring book: an illustrated journey through more than a century of Nobel Prizes in Chemistry. Each of the forty pages you'll find here represents a groundbreaking discovery or invention that has shaped the way we understand and use chemistry in our everyday lives. From the earliest revelations about atoms and bonds to lifesaving medicines, new materials, and the tools that let us peer into the molecular world, these drawings celebrate the creativity and persistence of scientists whose work changed history.

The illustrations are meant to be both accurate and playful. Chemical structures and laboratory instruments are mostly correct, though sometimes simplified or adapted so they are more fun to color.

There's no single "right" way to add color to these pages: think of them as an invitation to experiment, just as the Nobel laureates did in their laboratories. You might choose to stay faithful to the science, or you might just enjoy the shapes, lines, and patterns. Either way, you are part of the story now, adding your layer of creativity to the history of chemistry.

So take a pencil, marker, or brush, and step into this timeline of discovery.

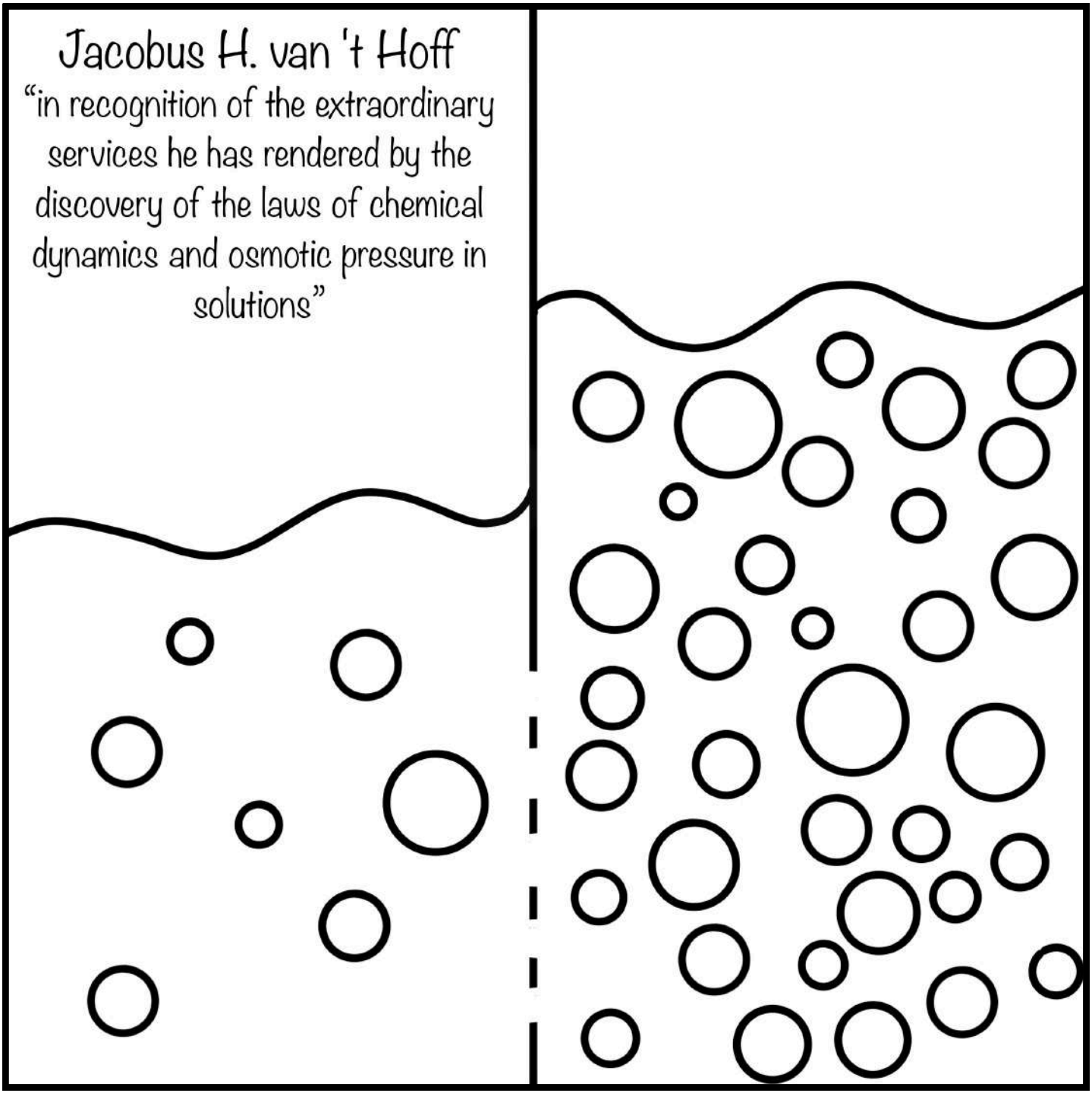
Relax, enjoy, and celebrate the wonders of chemistry, one Nobel at a time.

P.S. The illustrations have all been hand-drawn with care, no genAI here!!!

1901 - Color particles of different sizes separated by a solvent-permeable membrane:

Jacobus H. van 't Hoff

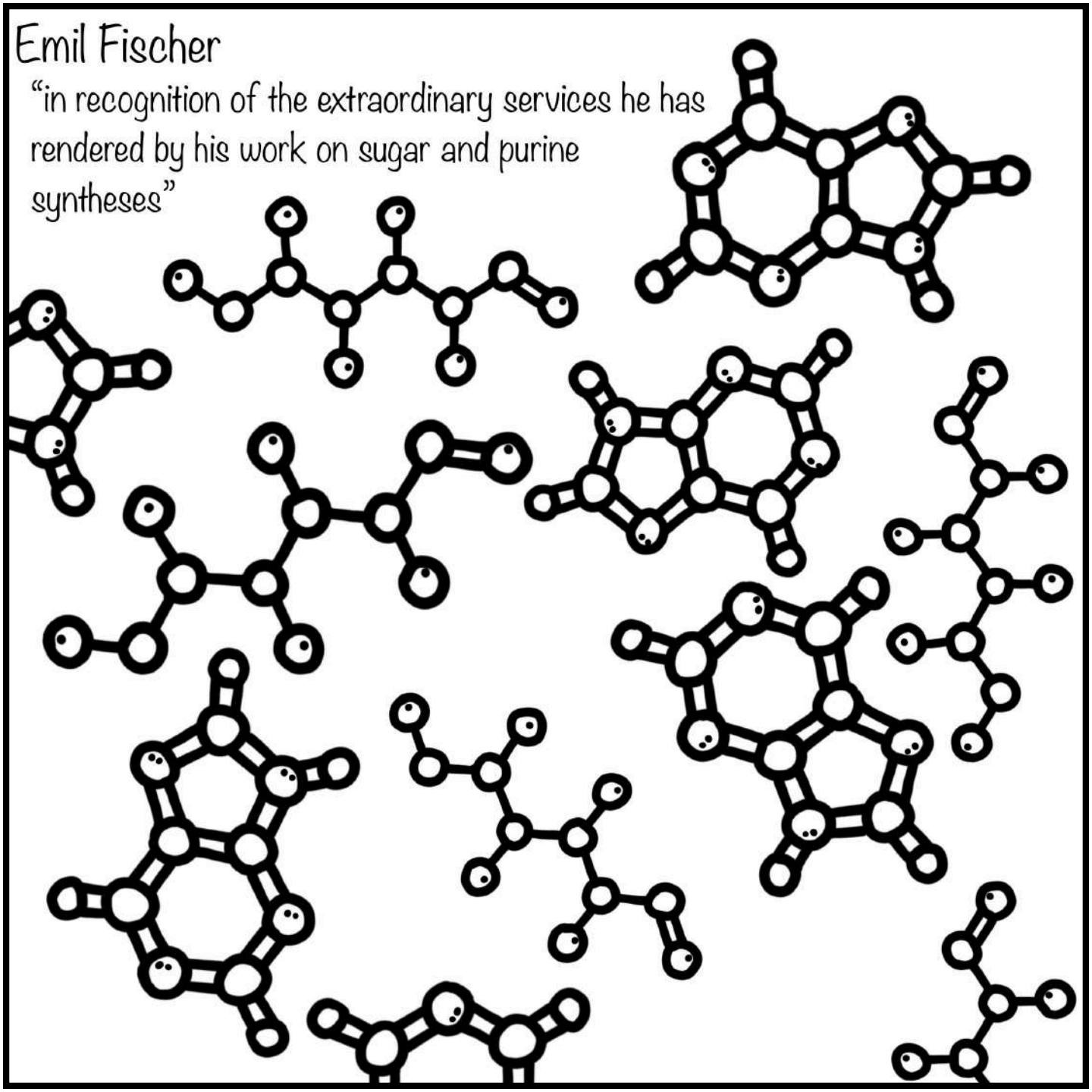
"in recognition of the extraordinary services he has rendered by the discovery of the laws of chemical dynamics and osmotic pressure in solutions"



1902 - Color glucose (linear) and a purine:
. = Oxygen
.. = Nitrogen

Emil Fischer

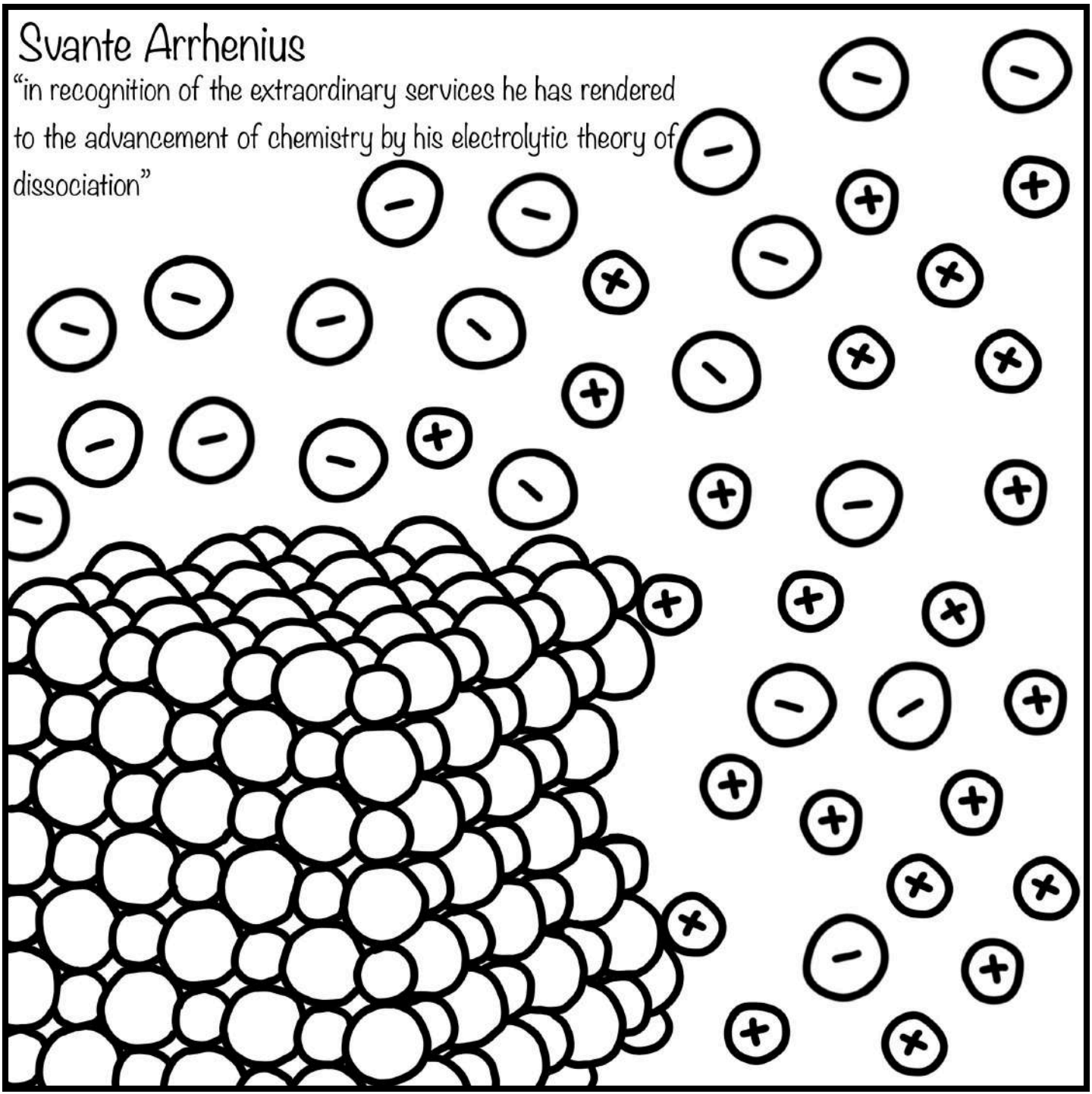
"in recognition of the extraordinary services he has rendered by his work on sugar and purine syntheses"



1903 - Color sodium chloride (table salt) dissolving:

Svante Arrhenius

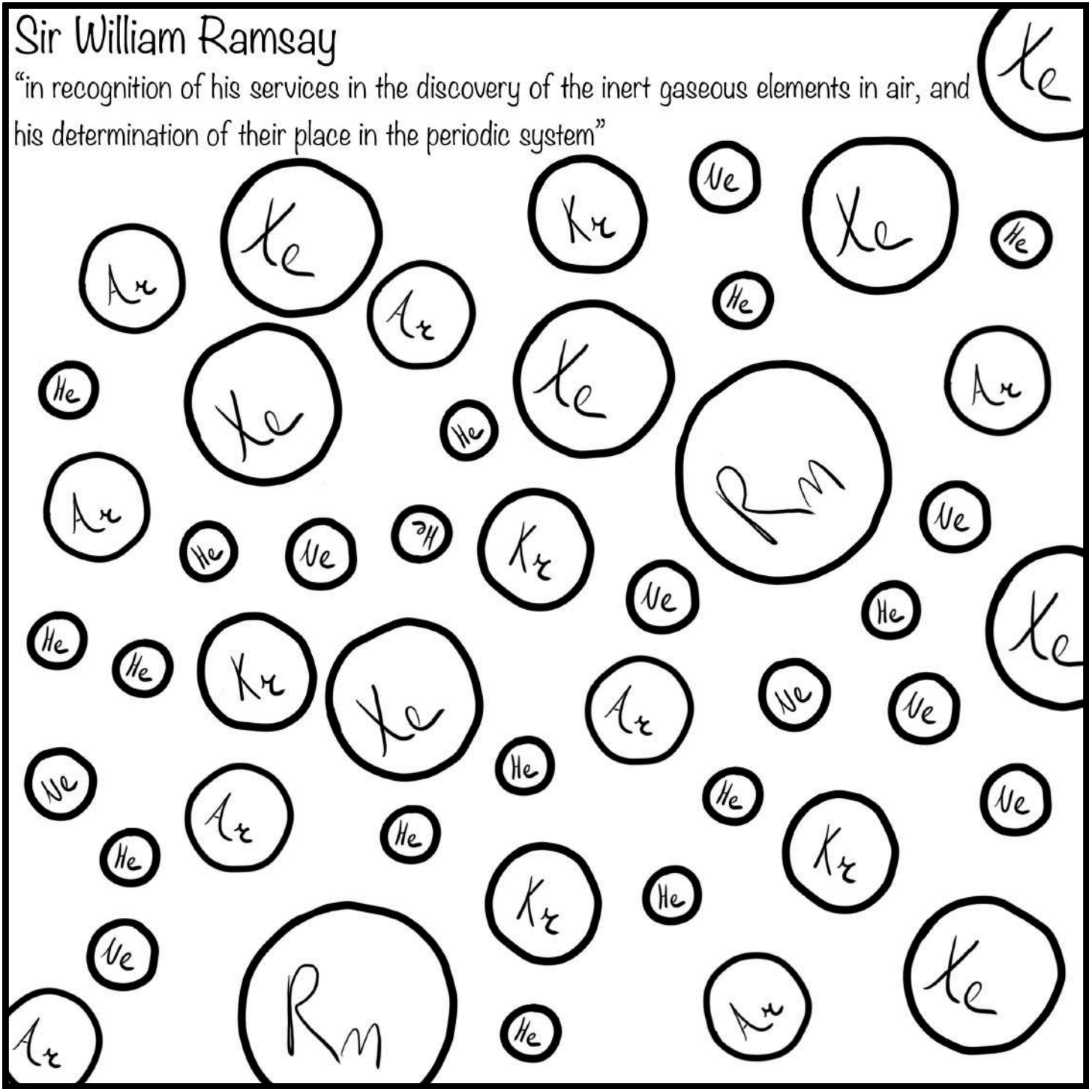
"in recognition of the extraordinary services he has rendered to the advancement of chemistry by his electrolytic theory of dissociation"



1904 - Color noble gases:

Sir William Ramsay

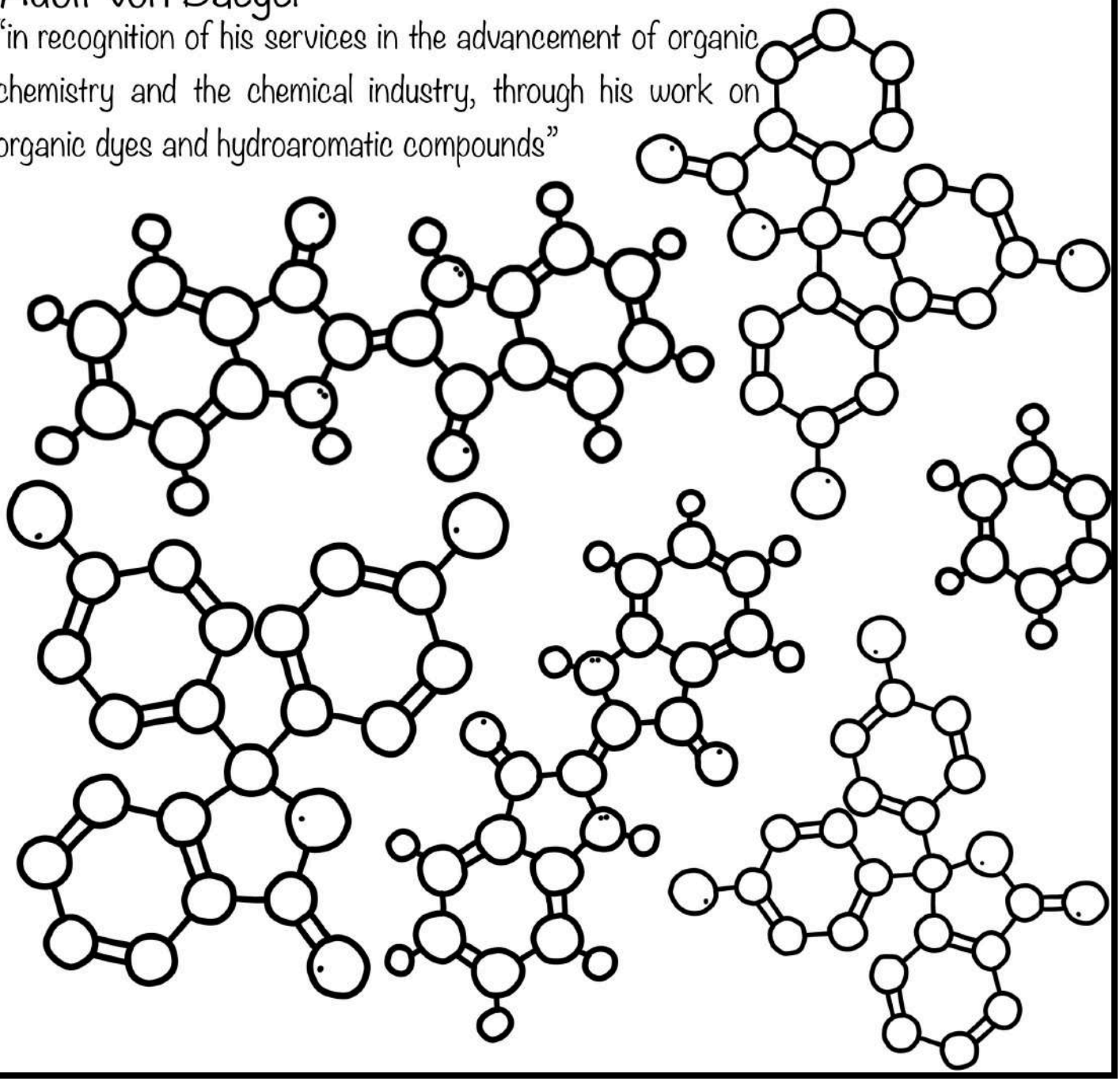
"in recognition of his services in the discovery of the inert gaseous elements in air, and his determination of their place in the periodic system"



1905 - Color indigo and phenolphthalein:
. = oxygen
.. = nitrogen

Adolf von Baeyer

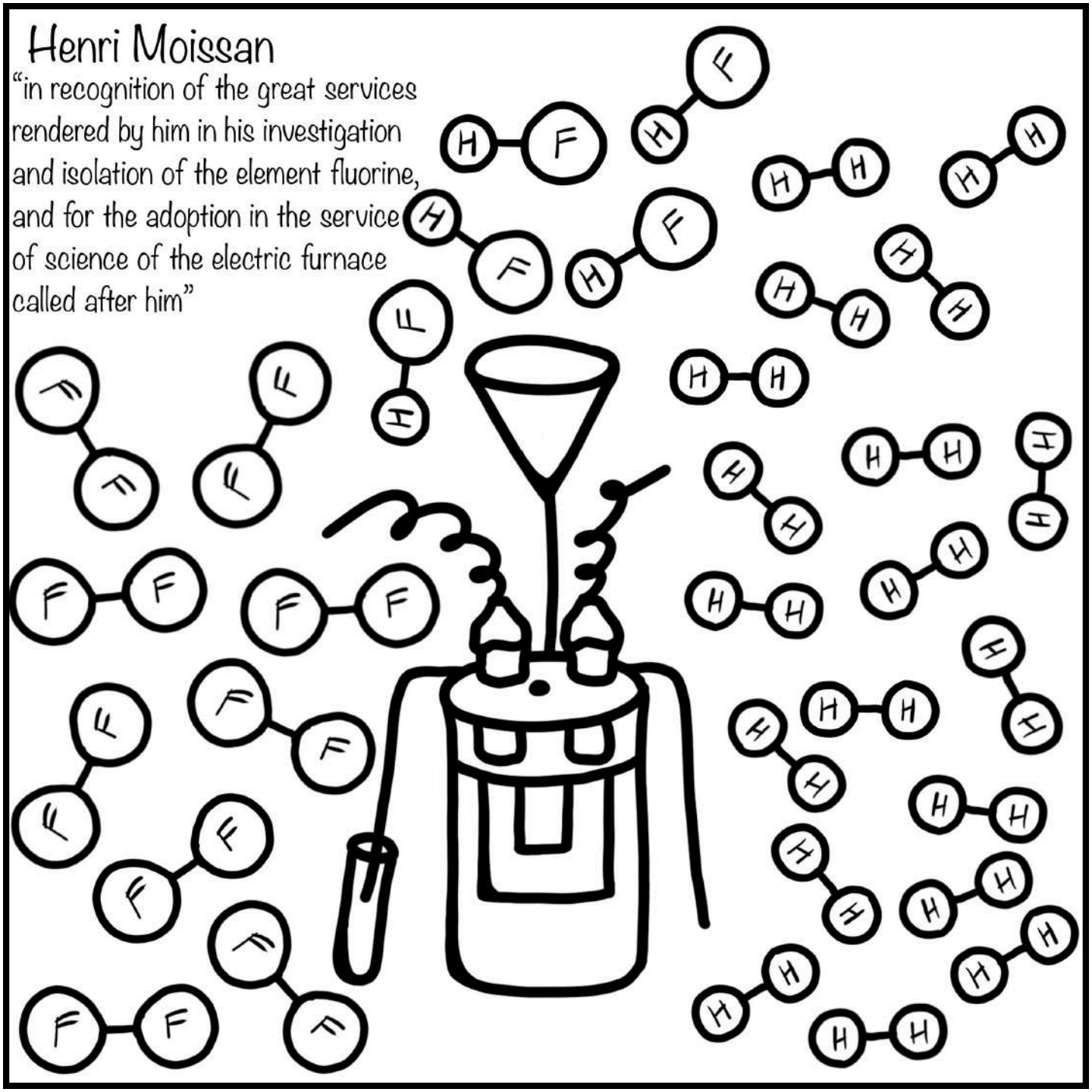
"in recognition of his services in the advancement of organic chemistry and the chemical industry, through his work on organic dyes and hydroaromatic compounds"



1906 - Color Moissan’s furnace:

Henri Moissan

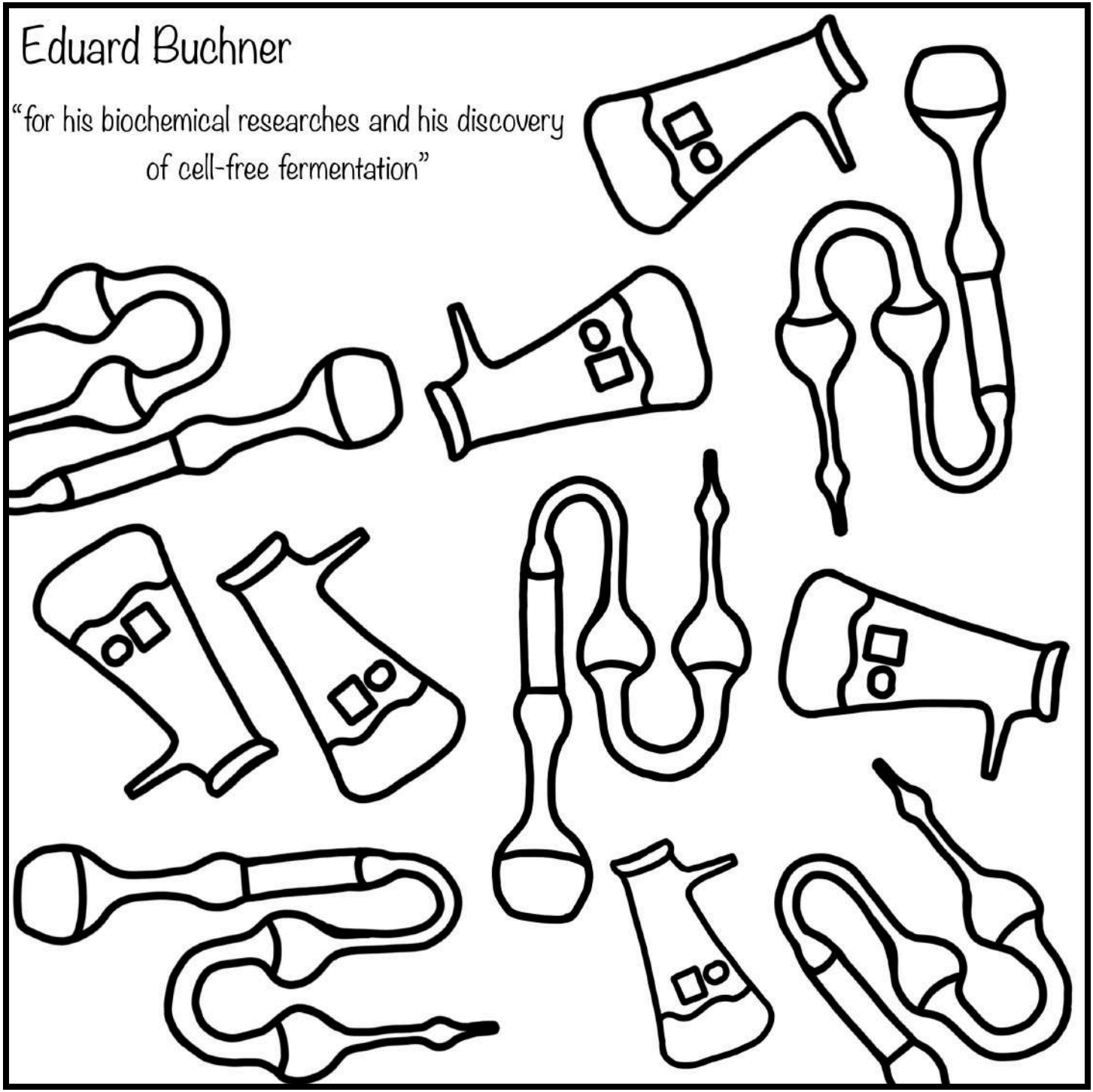
"in recognition of the great services rendered by him in his investigation and isolation of the element fluorine, and for the adoption in the service of science of the electric furnace called after him"



1907 - Color the fermentation glassware and the Büchner flask:

Eduard Buchner

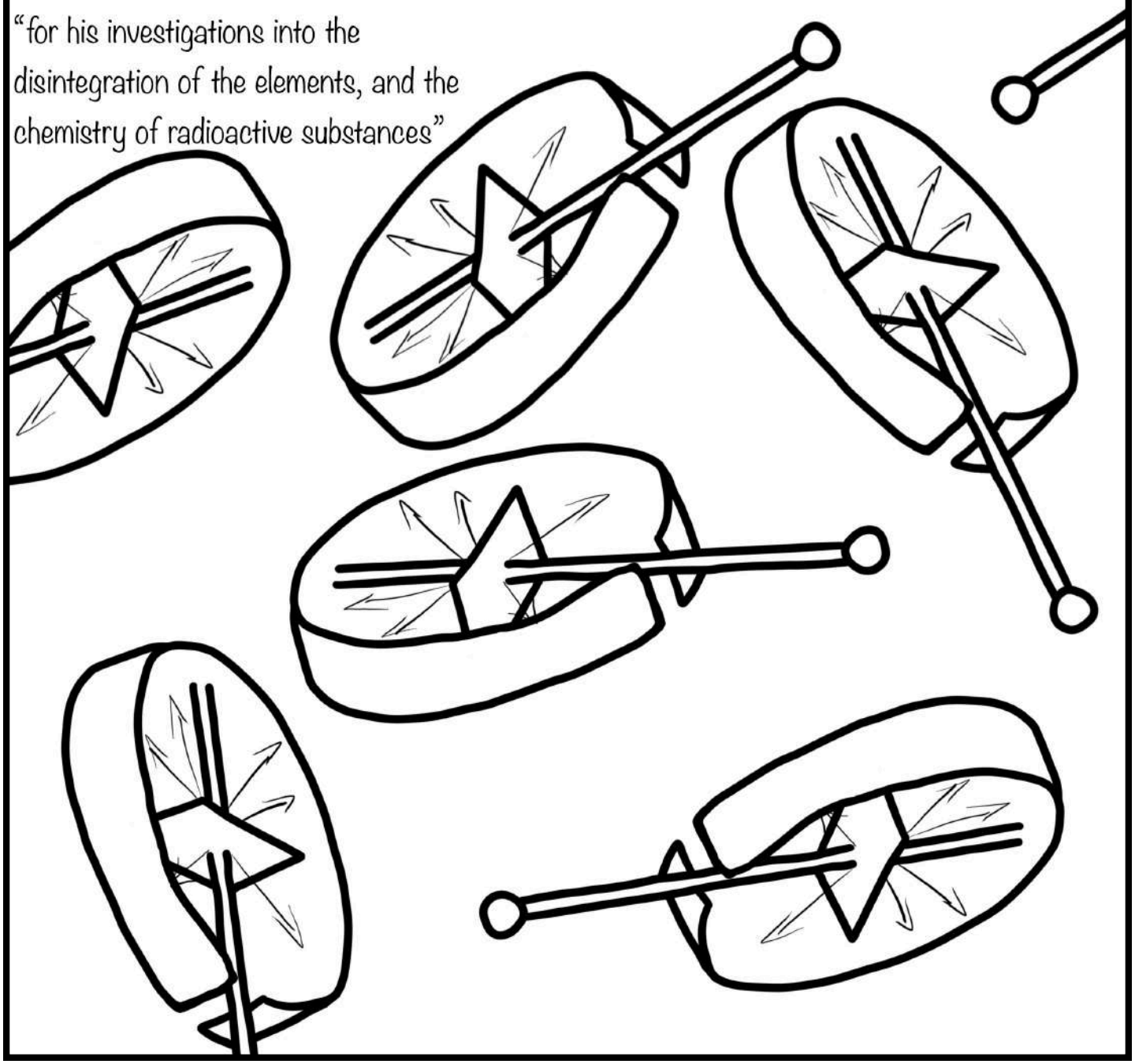
"for his biochemical researches and his discovery of cell-free fermentation"



1908 - Color Rutherford shooting beams of alpha particles on a golden foil:

Ernest Rutherford

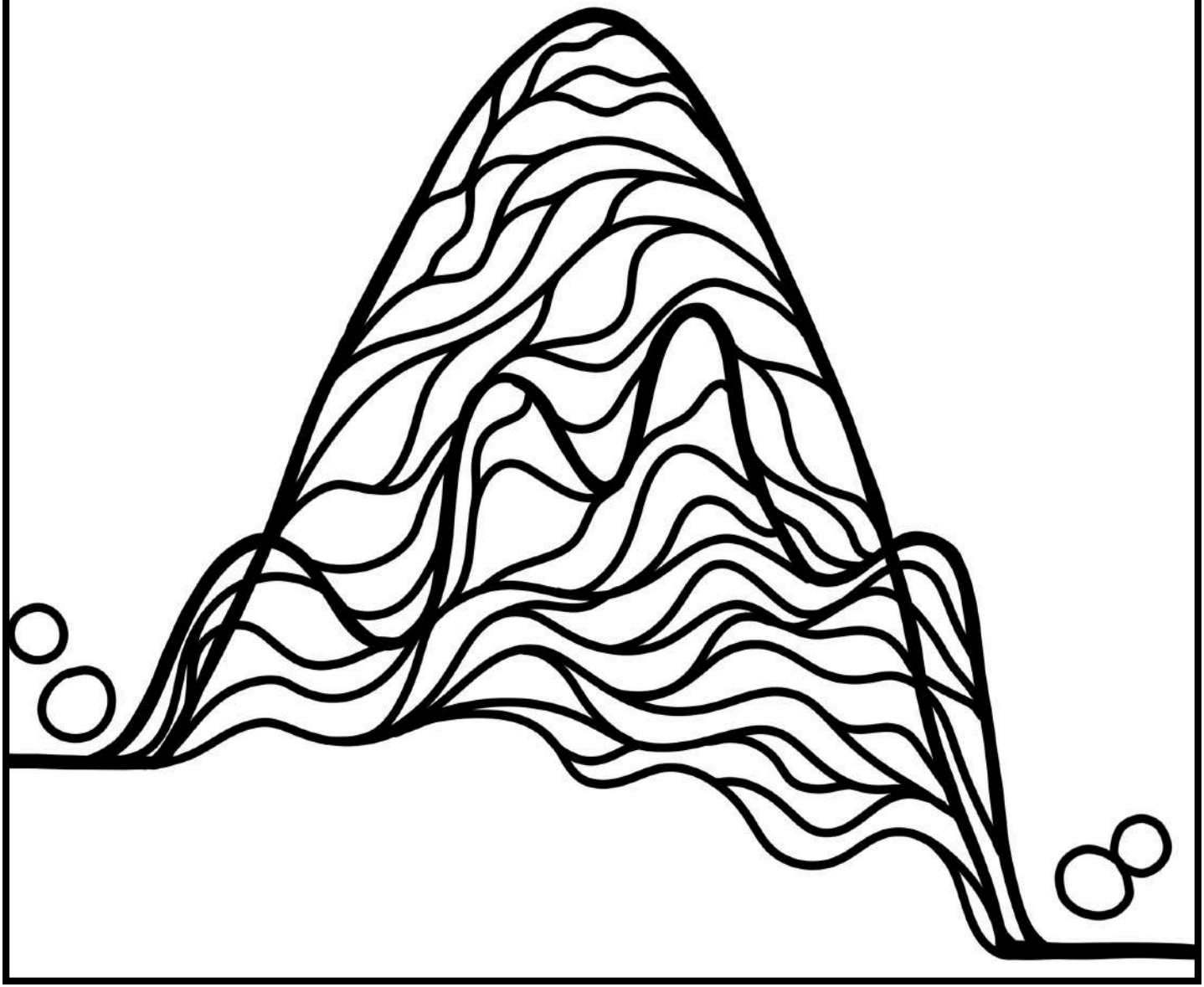
"for his investigations into the disintegration of the elements, and the chemistry of radioactive substances"



1909 - Color the energy diagram of a chemical reaction:

Wilhelm Ostwald

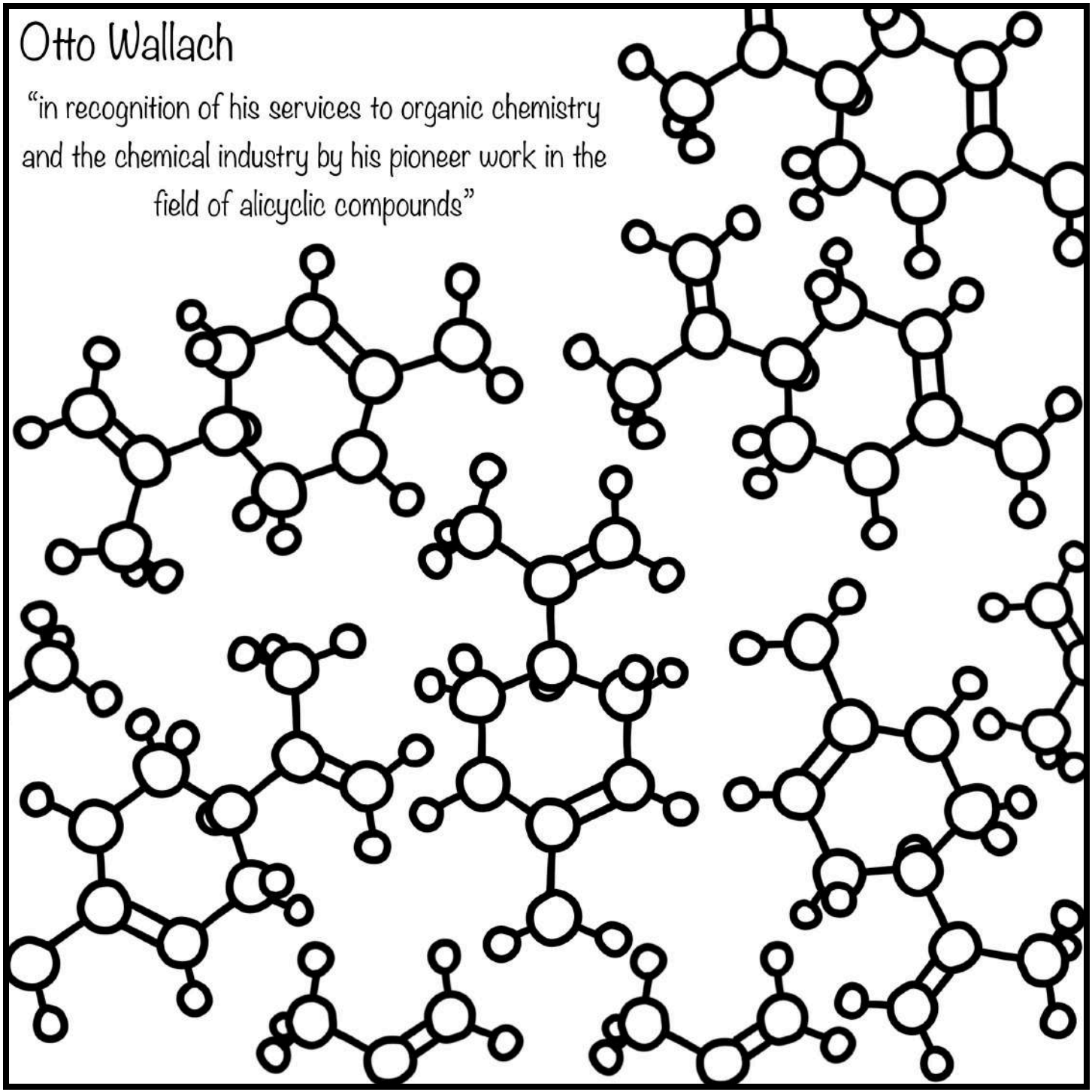
"in recognition of his work on catalysis and for his investigations into the fundamental principles governing chemical equilibria and rates of reaction"



1910 - Color the limonene molecule:

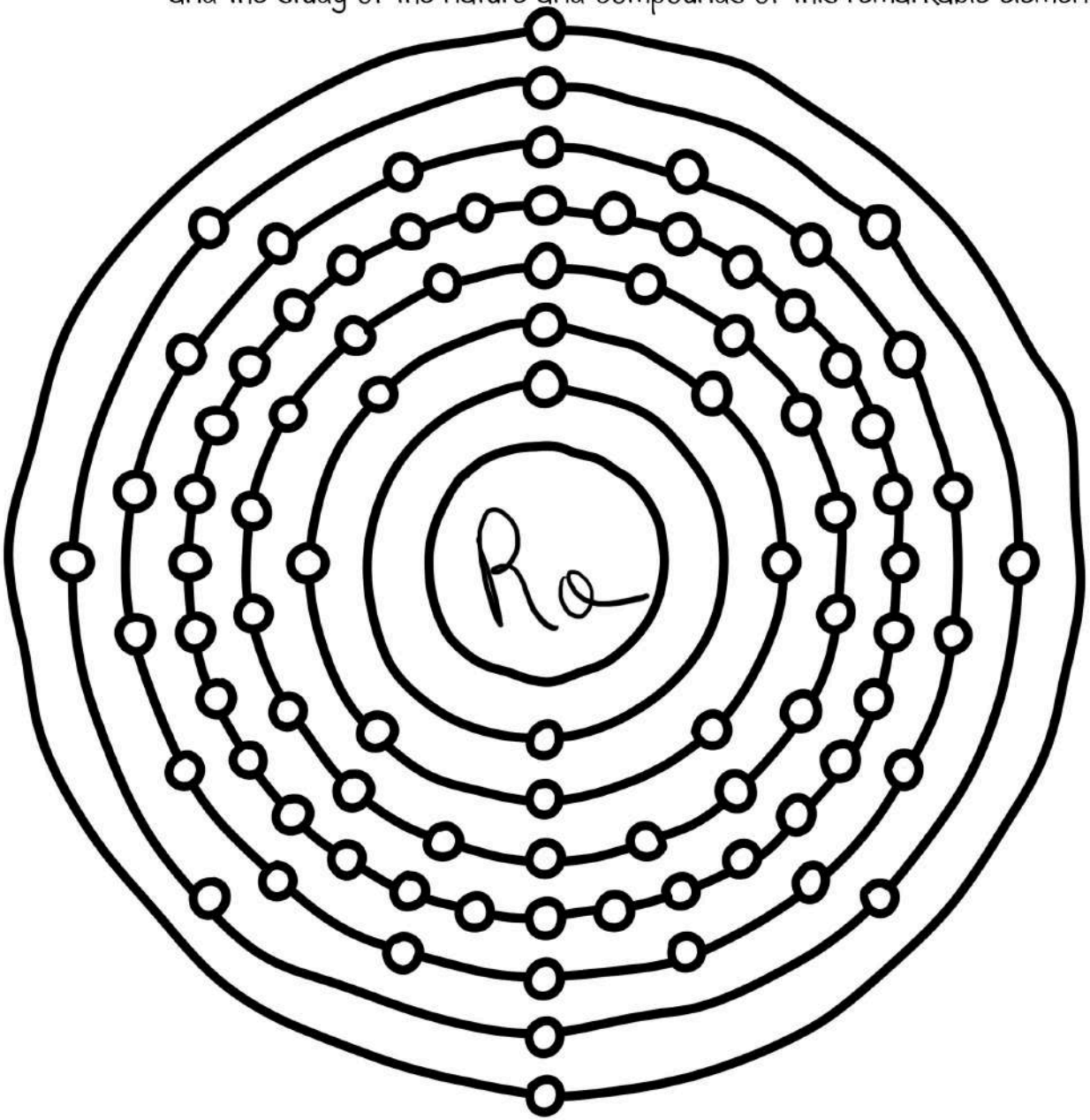
Otto Wallach

"in recognition of his services to organic chemistry and the chemical industry by his pioneer work in the field of alicyclic compounds"



1911 - Color the element Radon:
P.S. Marie Curie, née Skłodowska

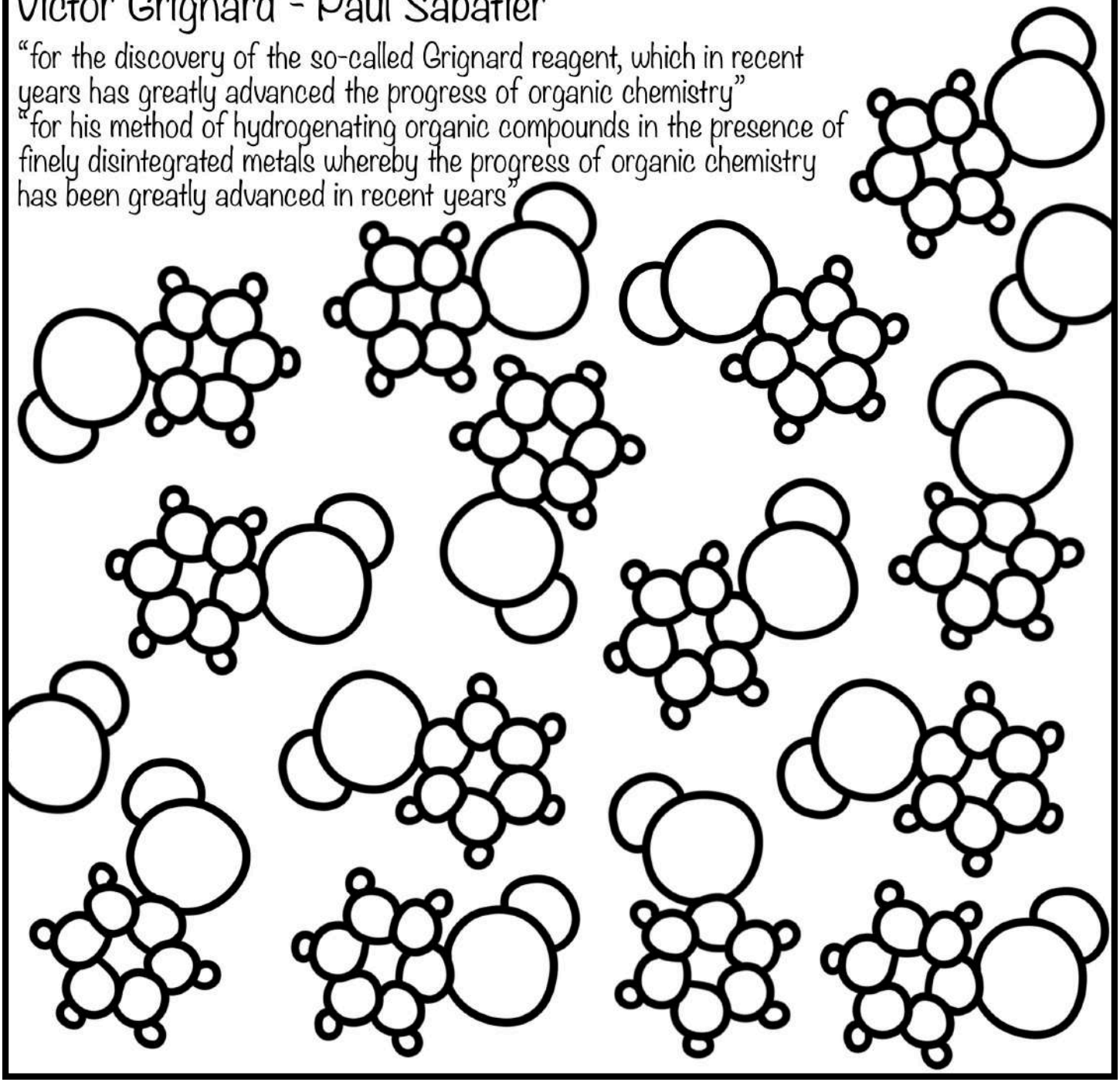
Marie Curie "in recognition of her services to the advancement of chemistry by the discovery of the elements radium and polonium, by the isolation of radium and the study of the nature and compounds of this remarkable element"



1912 - Color the Grignard reagent:
ArMgBr

Victor Grignard - Paul Sabatier

"for the discovery of the so-called Grignard reagent, which in recent years has greatly advanced the progress of organic chemistry"
"for his method of hydrogenating organic compounds in the presence of finely disintegrated metals whereby the progress of organic chemistry has been greatly advanced in recent years"



1913 - Color the two isomers of $[Co(NH_3)_4Cl_2]^+$:

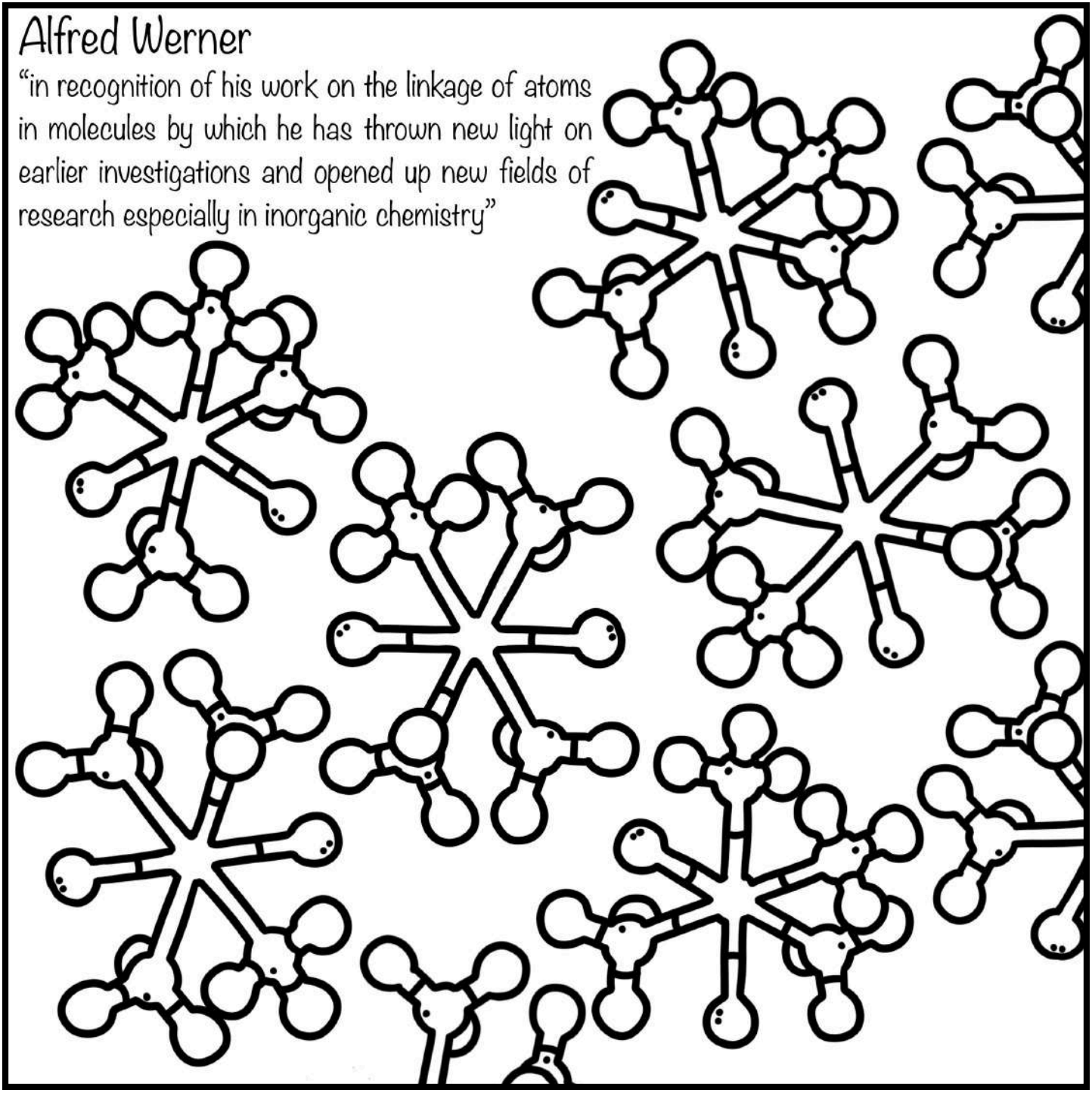
. = nitrogen

.. = chlorine

central atom = cobalt

Alfred Werner

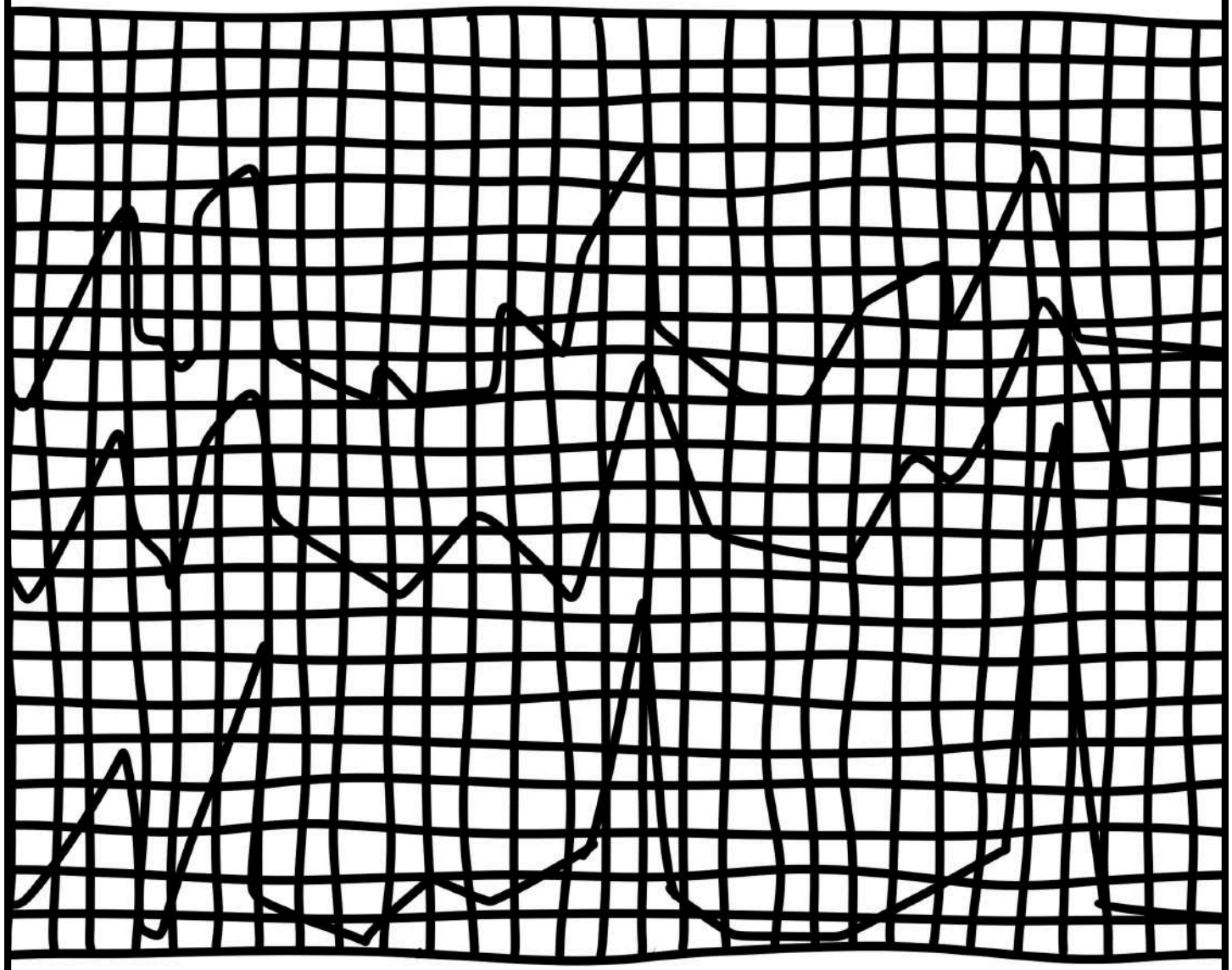
"in recognition of his work on the linkage of atoms in molecules by which he has thrown new light on earlier investigations and opened up new fields of research especially in inorganic chemistry"



1914 - Color the Richards' scheme of atomic weights:

Theodore W. Richards

"in recognition of his accurate determinations of the atomic weight of a large number of chemical elements"



1915 - Color part of the chlorophyll molecule:

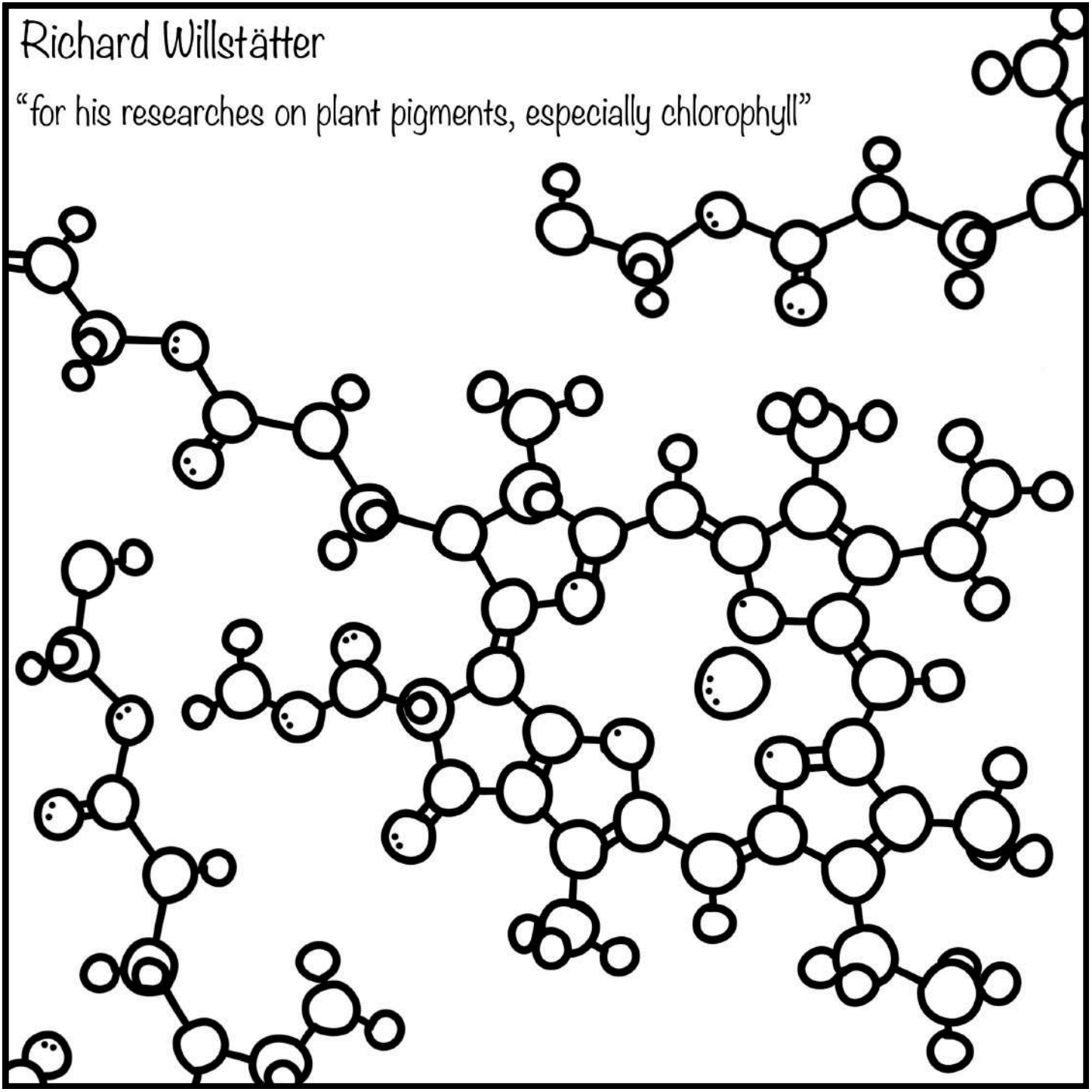
. = nitrogen

.. = oxygen

... = magnesium

Richard Willstätter

"for his researches on plant pigments, especially chlorophyll"



1918 - Color the ammonia (NH_3),Nitrogen (N_2), and Hydrogen (H_2):

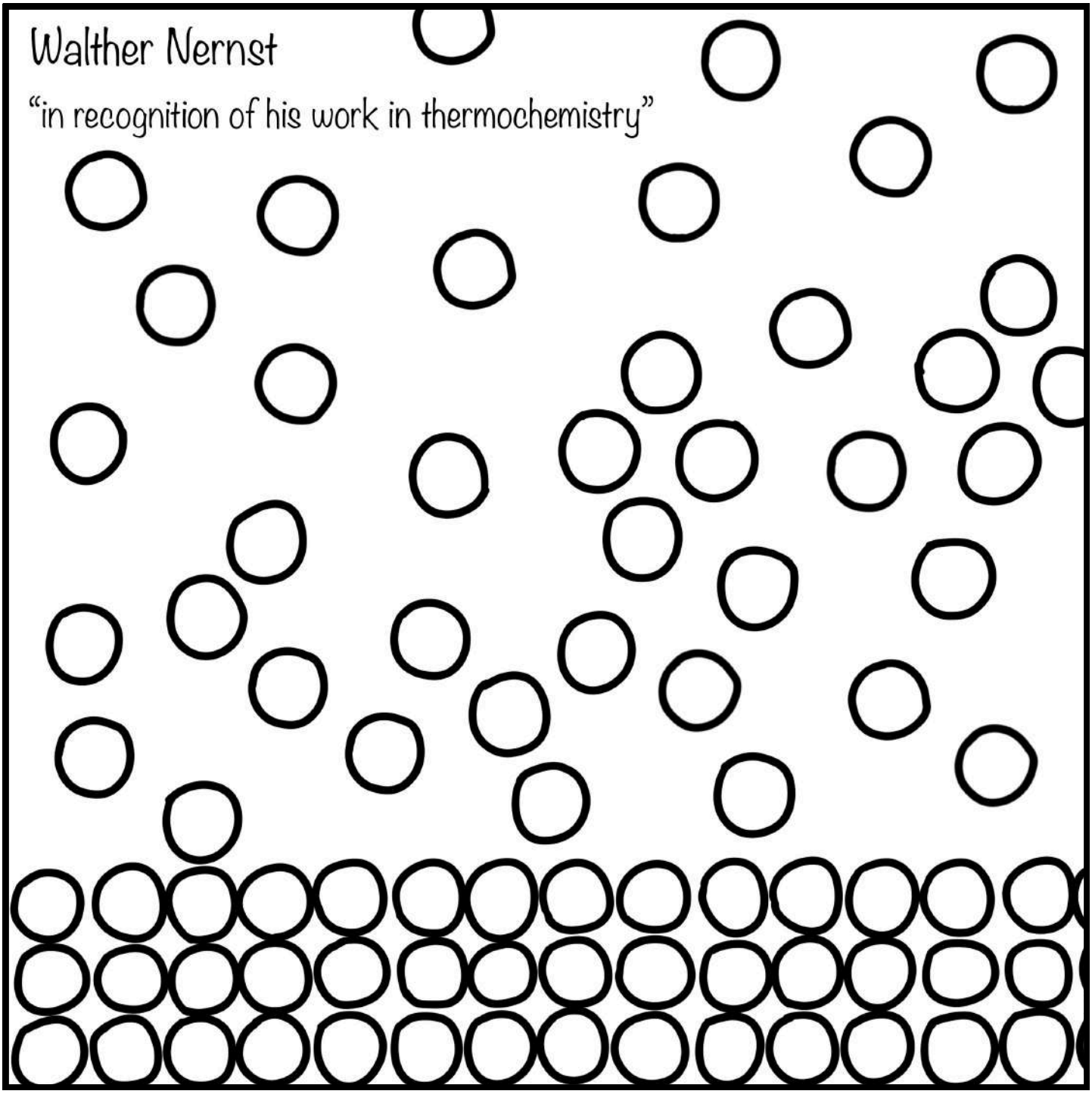
Fritz Haber

"for the synthesis of ammonia from its elements"

1920 - Color the particles in thermal equilibrium:

Walther Nernst

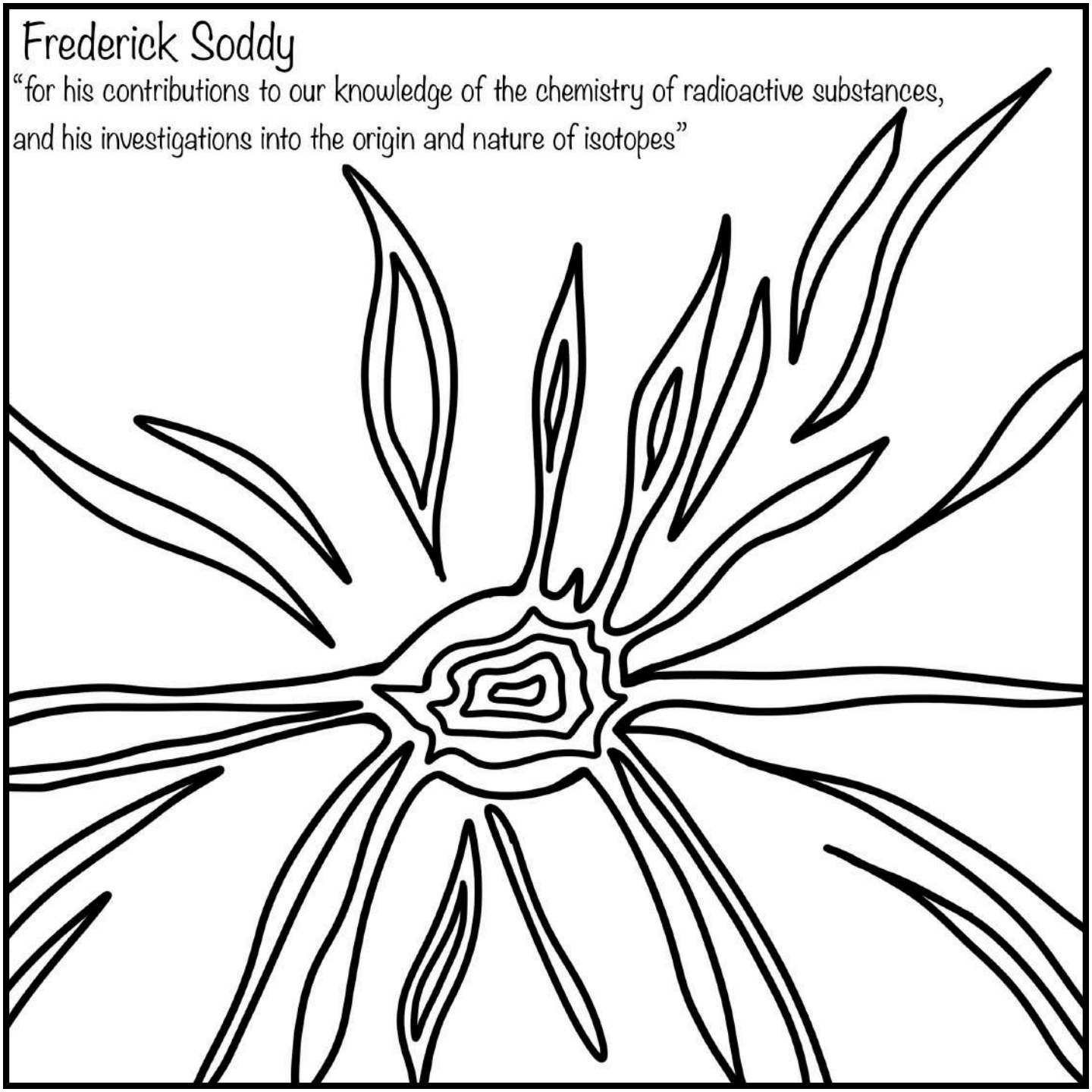
"in recognition of his work in thermochemistry"



1921 - Color the positive ray parabolas of Neon:

Frederick Soddy

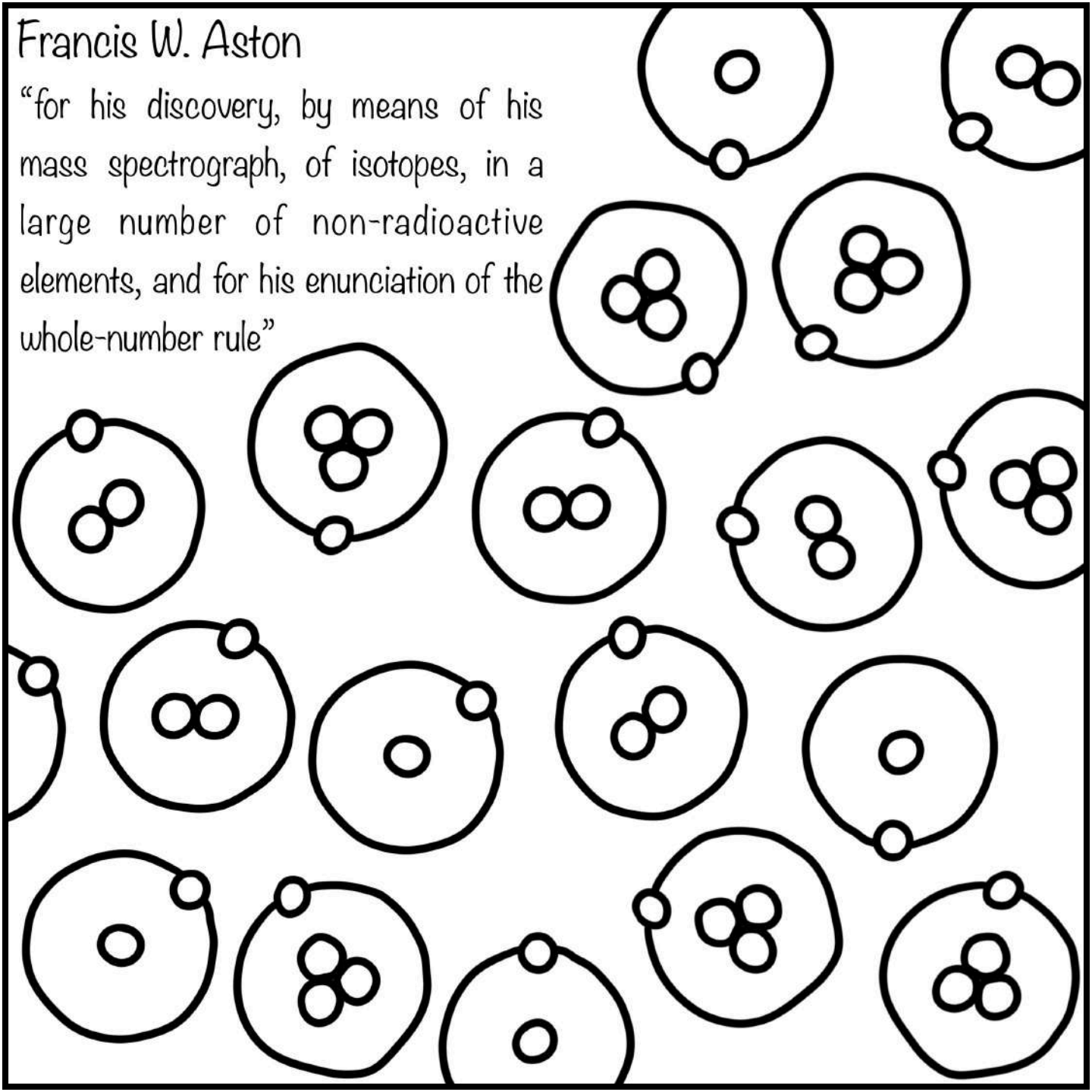
"for his contributions to our knowledge of the chemistry of radioactive substances, and his investigations into the origin and nature of isotopes"



1922 - Color the isotopes:

Francis W. Aston

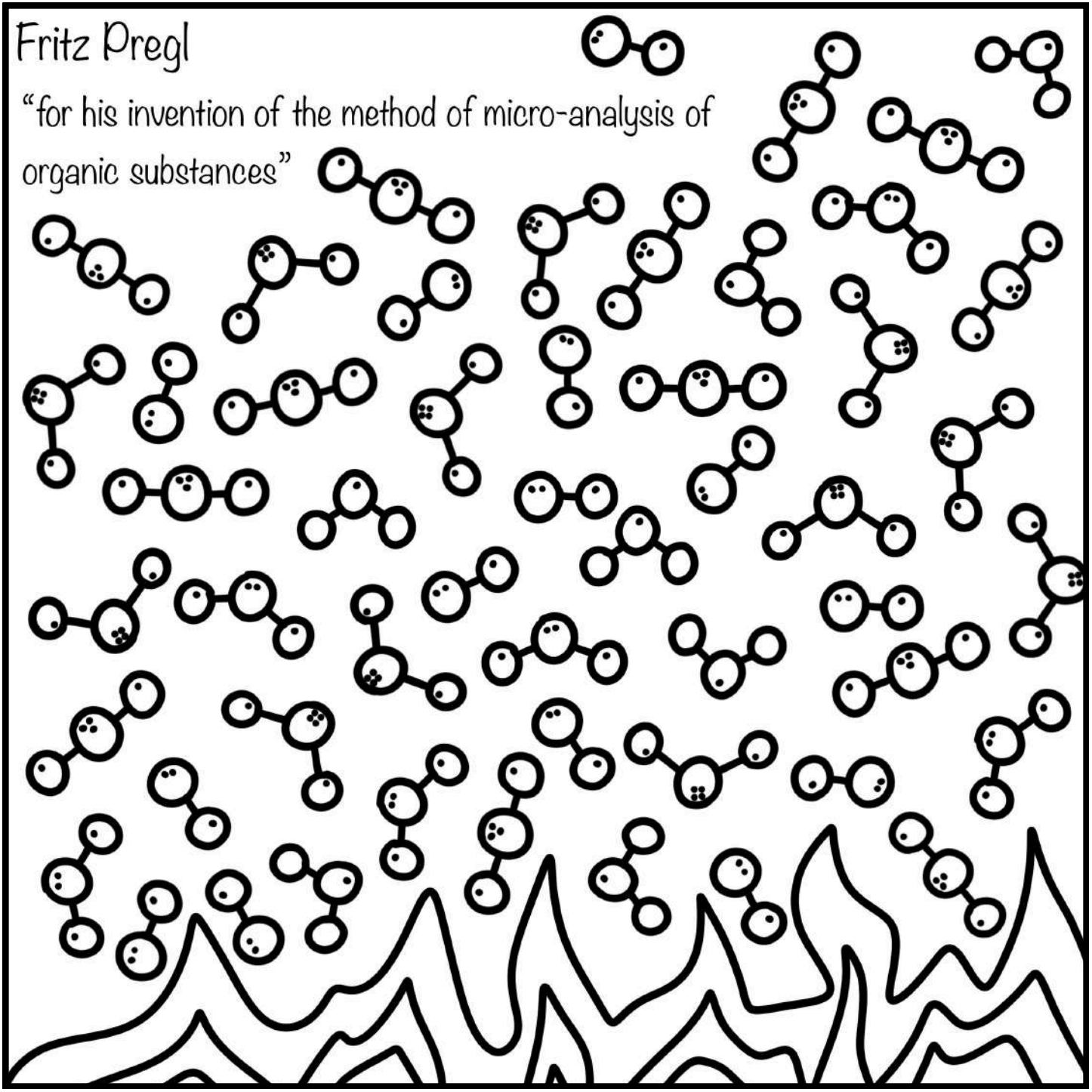
"for his discovery, by means of his mass spectrograph, of isotopes, in a large number of non-radioactive elements, and for his enunciation of the whole-number rule"



1923 - Color CO_2, H_2O, NO or NO_2, and SO_2 from the elemental analysis:

Fritz Pregl

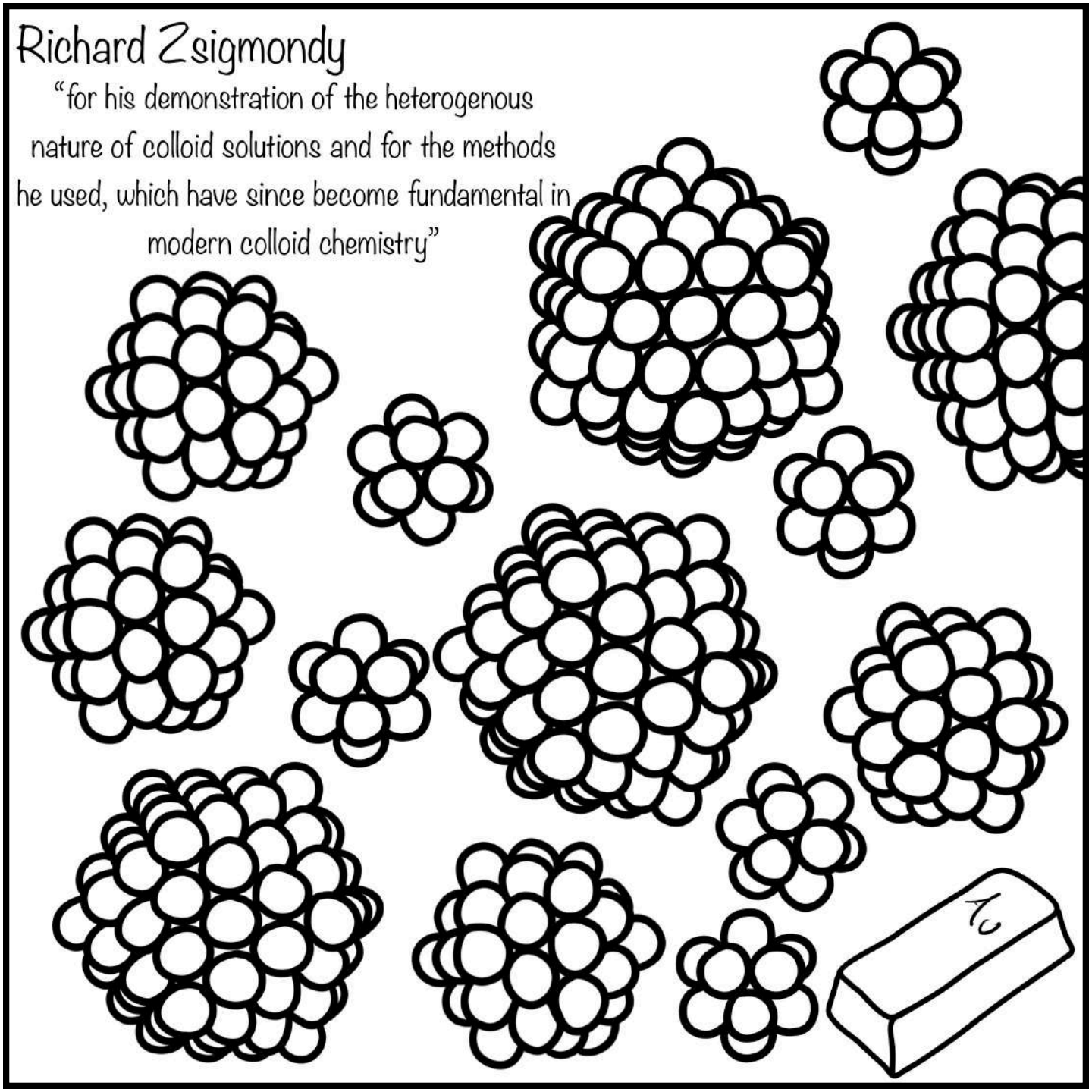
"for his invention of the method of micro-analysis of organic substances"



1925 - Color the gold nanoparticles:

Richard Zsigmondy

"for his demonstration of the heterogenous nature of colloid solutions and for the methods he used, which have since become fundamental in modern colloid chemistry"



1926 - Color the ultracentrifuge:

The Svedberg

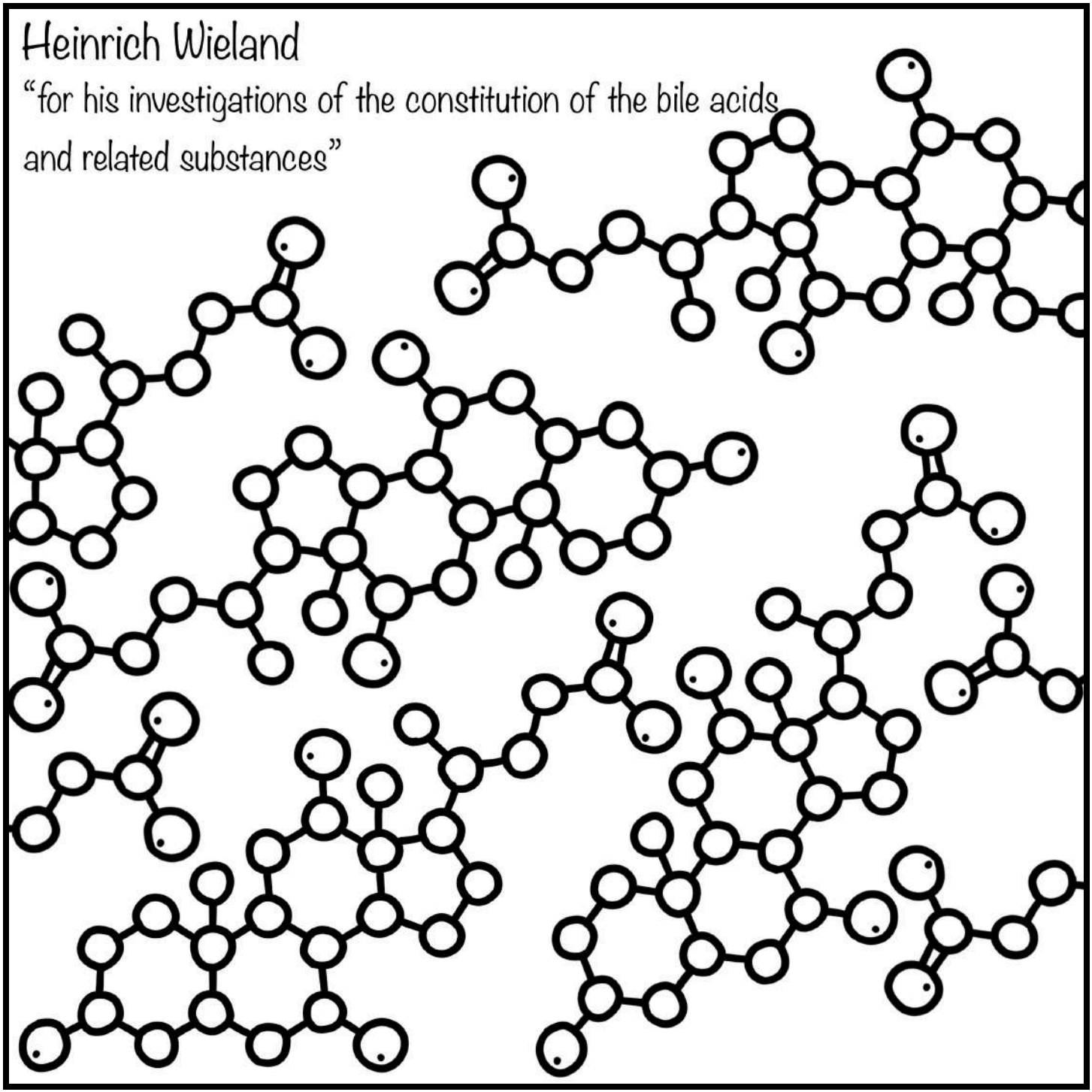
"for his work on disperse systems"

1927 - Color the cholic acid:

. = oxygen

Heinrich Wieland

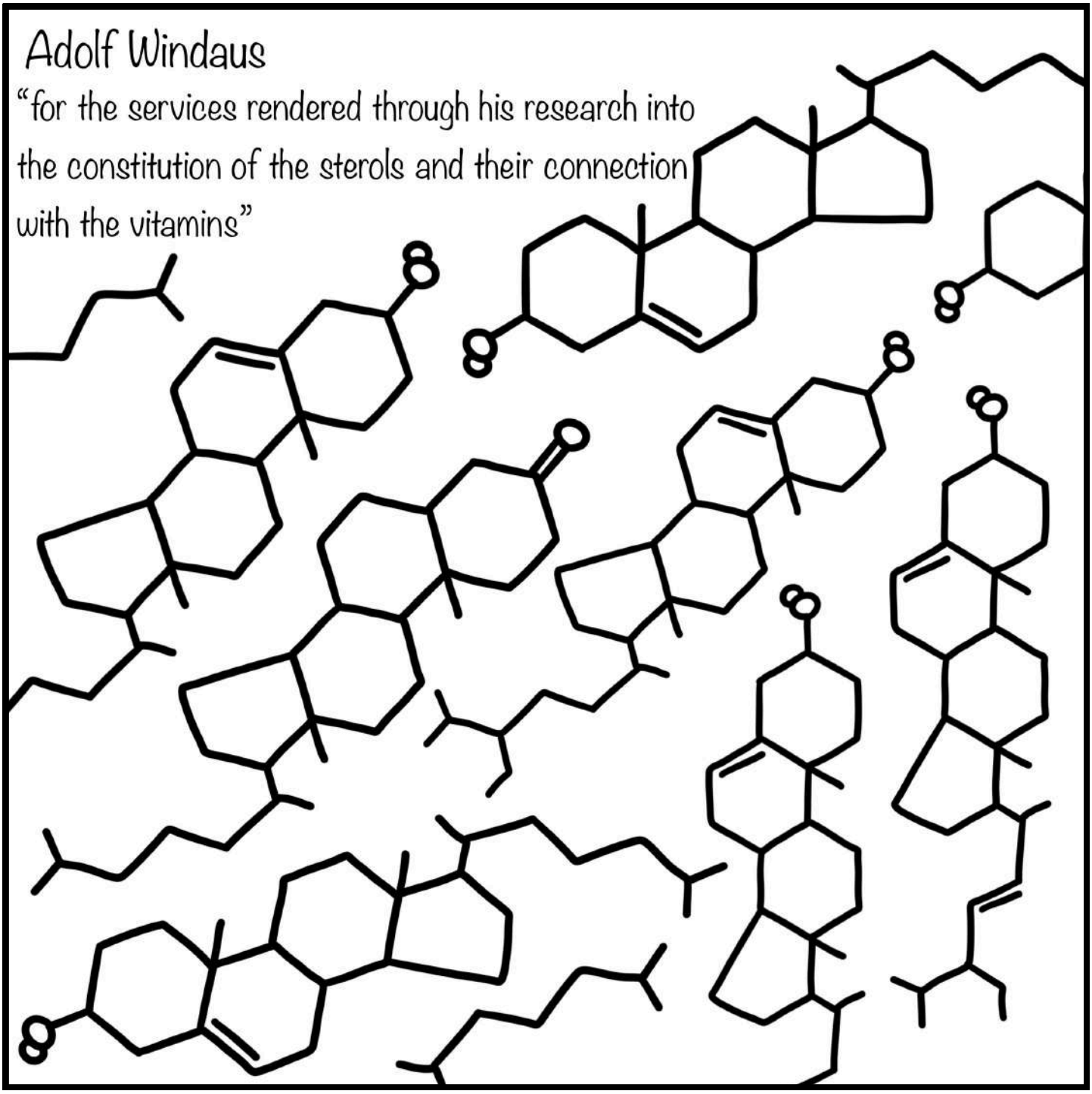
"for his investigations of the constitution of the bile acids and related substances"



1928 - Color various -sterols:

Adolf Windaus

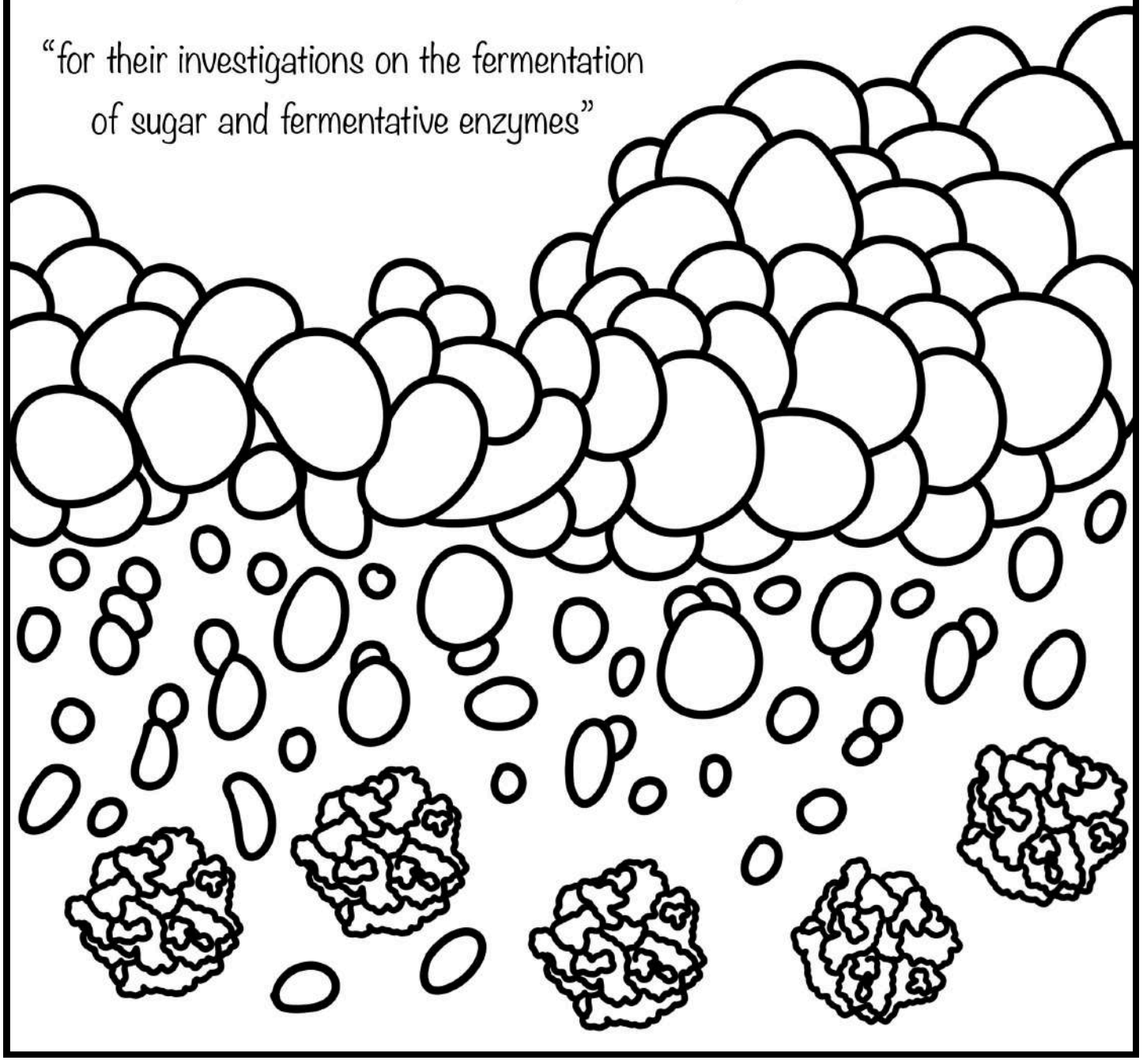
"for the services rendered through his research into the constitution of the sterols and their connection with the vitamins"



1929 - Color the fermentation foam:

Arthur Harden and Hans von Euler-Chelpin

"for their investigations on the fermentation of sugar and fermentative enzymes"



1930 - Color the heamin:

. = hydrogen

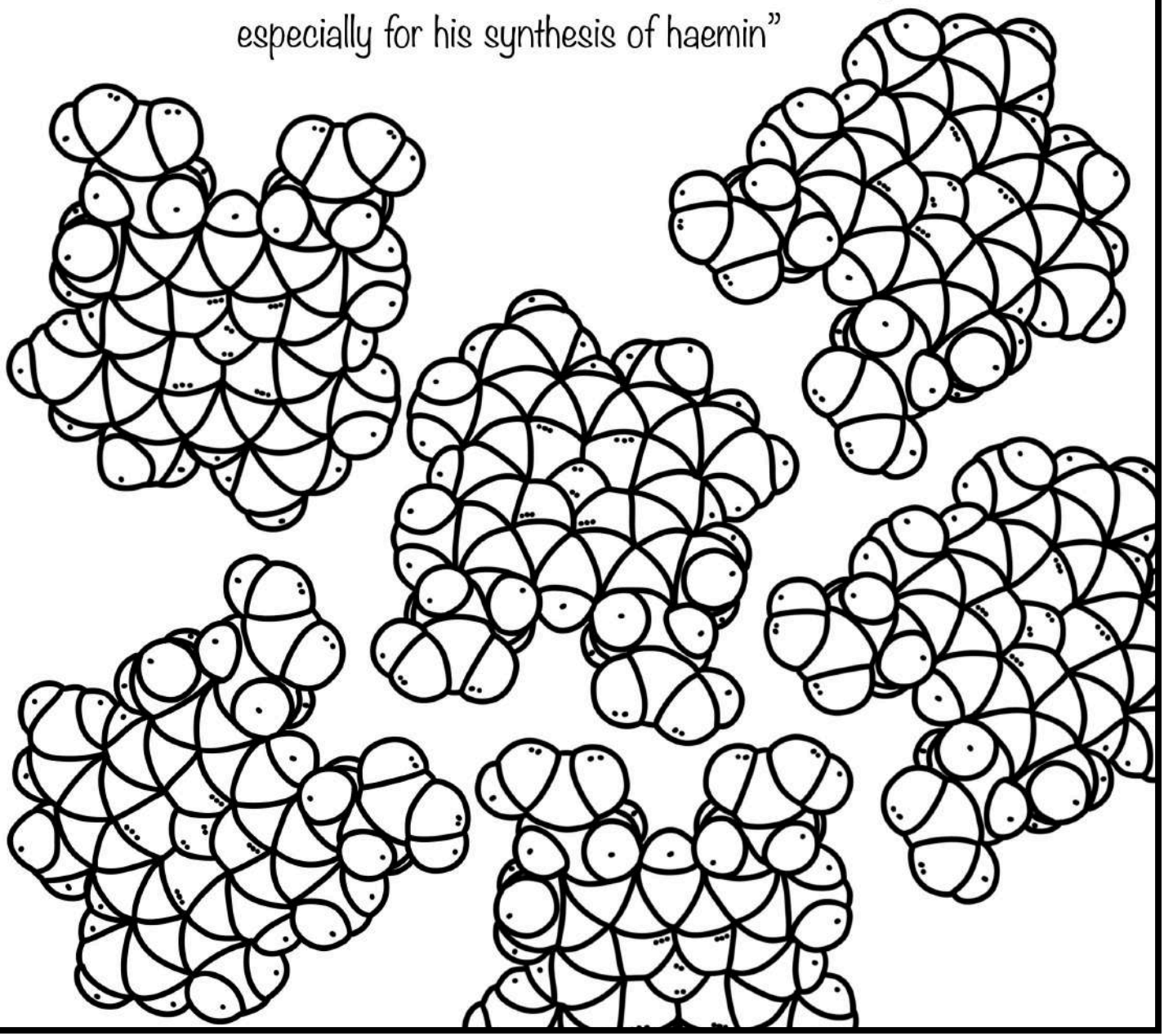
.. = oxygen

... = nitrogen

.... = iron

Hans Fischer

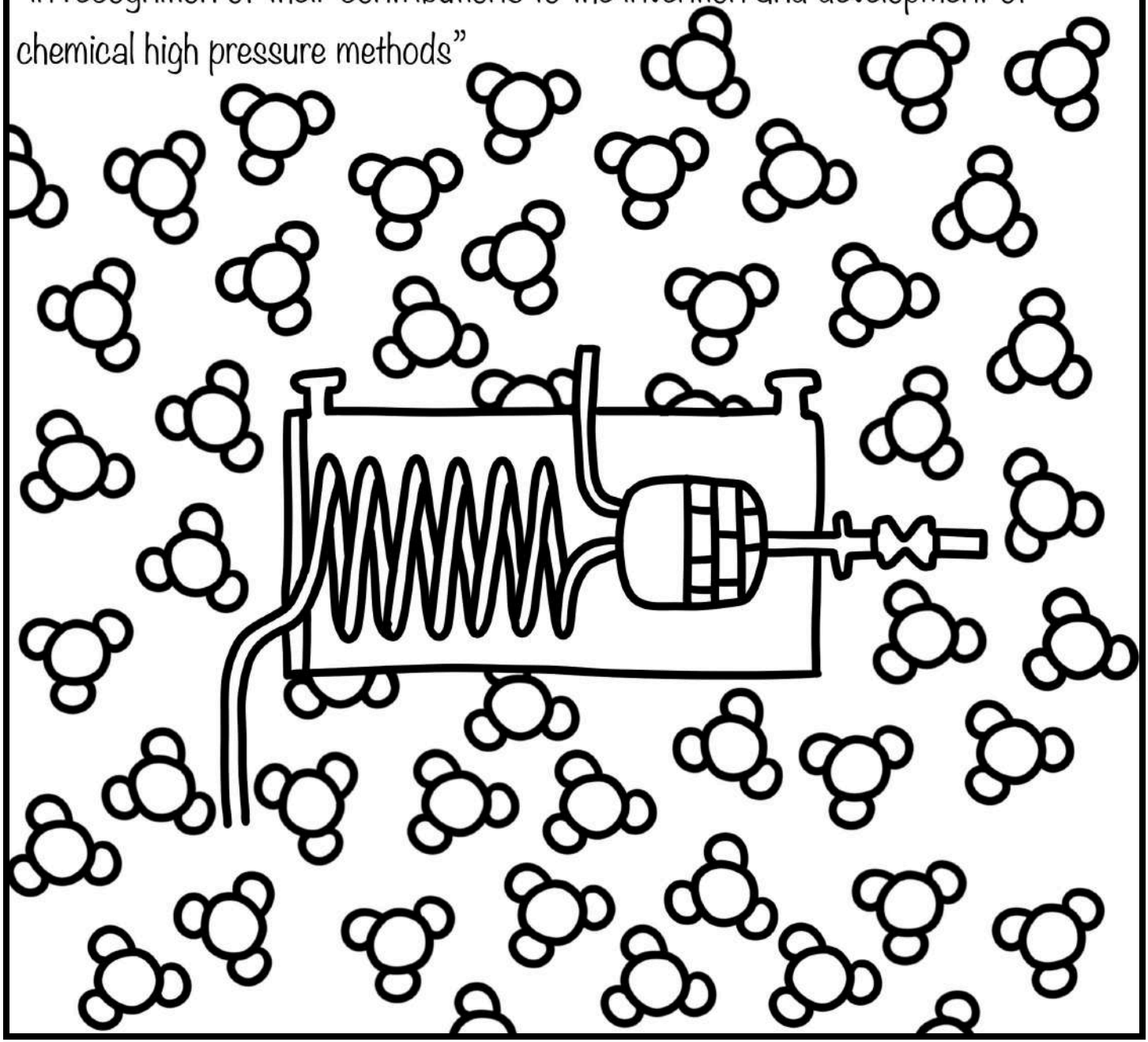
"for his researches into the constitution of haemin and chlorophyll and especially for his synthesis of haemin"



1931 - Color the ammonia and the high pressure machine:

Carl Bosch and Friedrich Bergius

"in recognition of their contributions to the invention and development of chemical high pressure methods"



1932 - Color the Langmuir film:

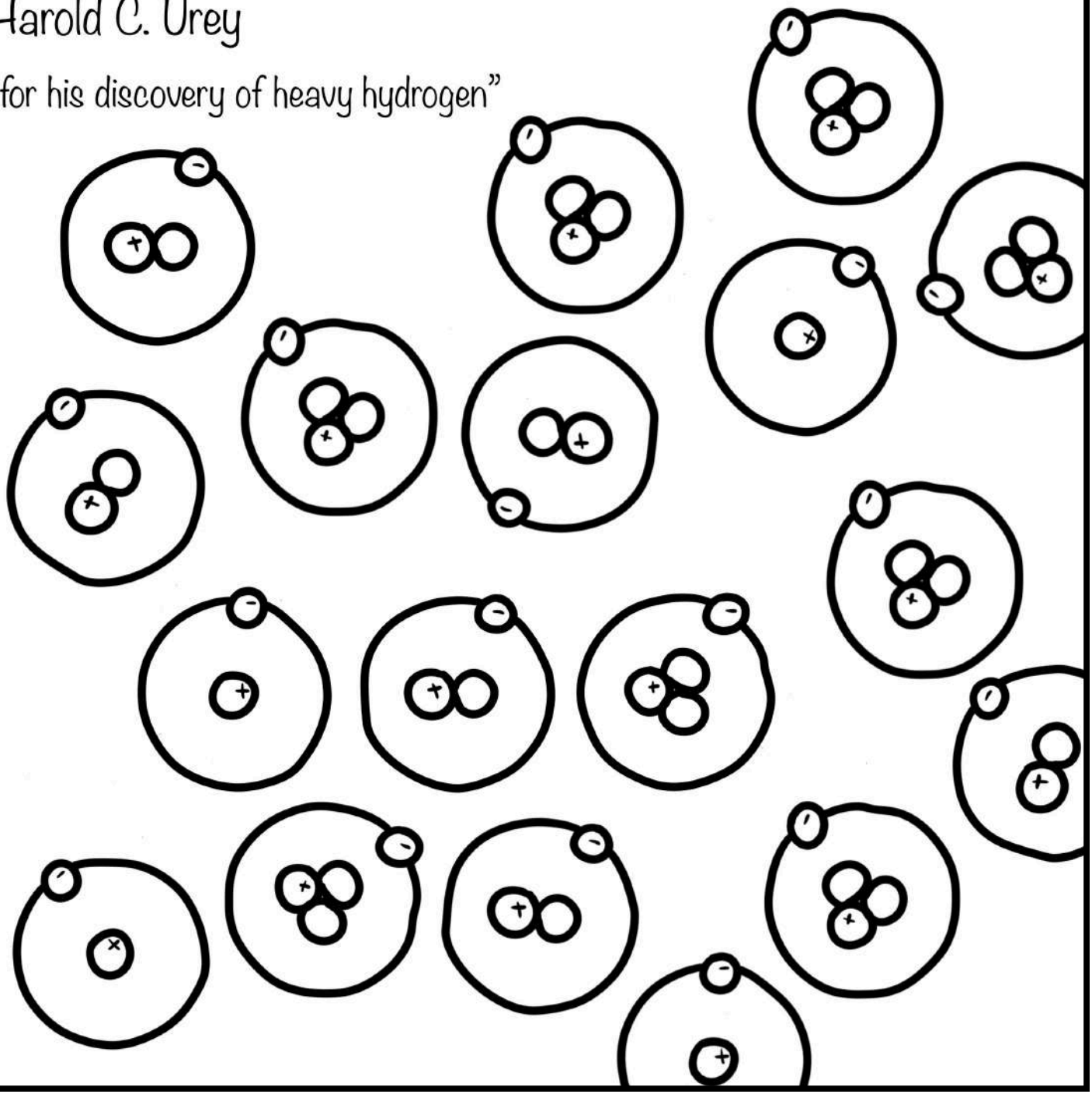
Irving Langmuir

"for his discoveries and investigations in surface chemistry"

1934 - Color the hydrogen isotopes:

Harold C. Urey

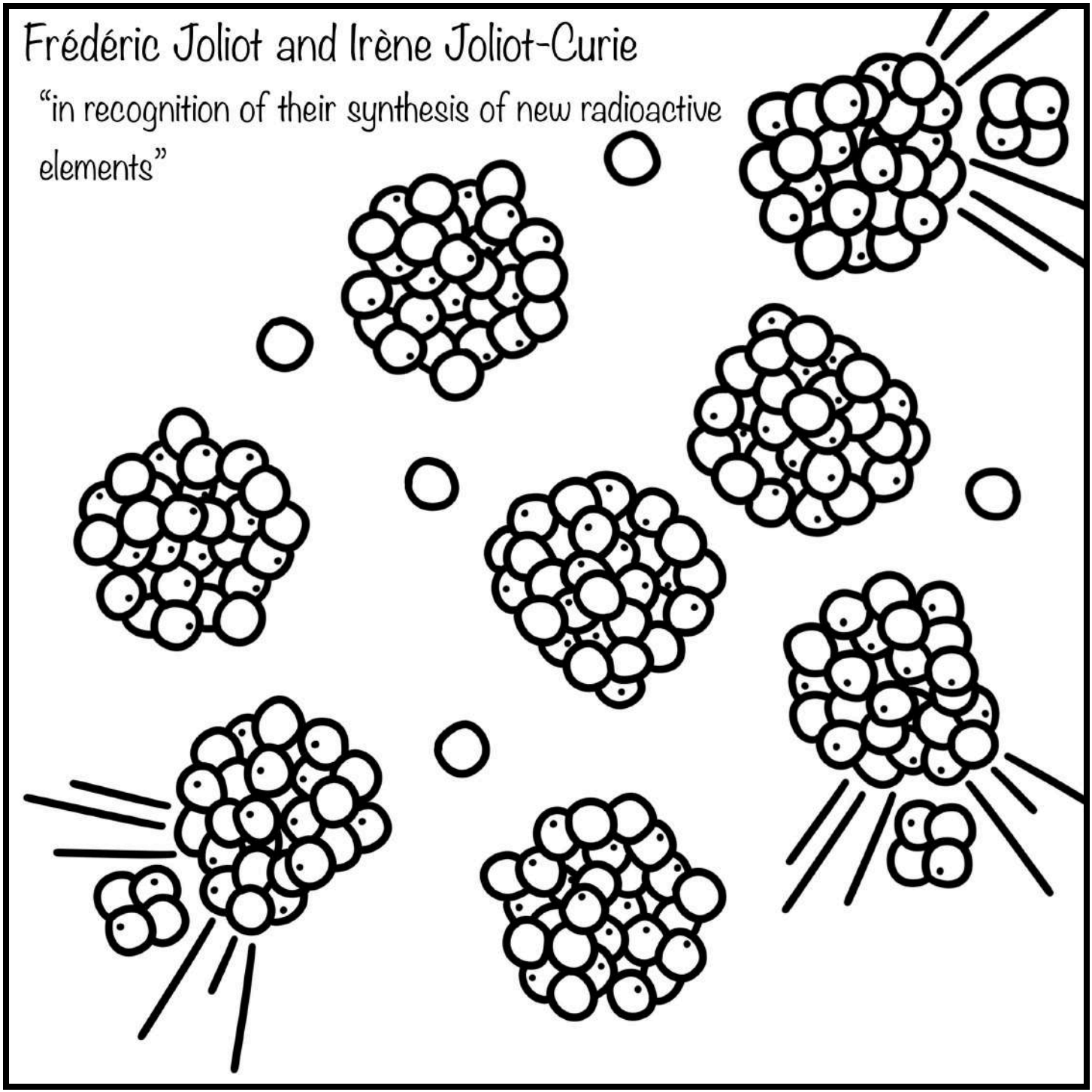
"for his discovery of heavy hydrogen"



1935 - Color the radioactive elements:

Frédéric Joliot and Irène Joliot-Curie

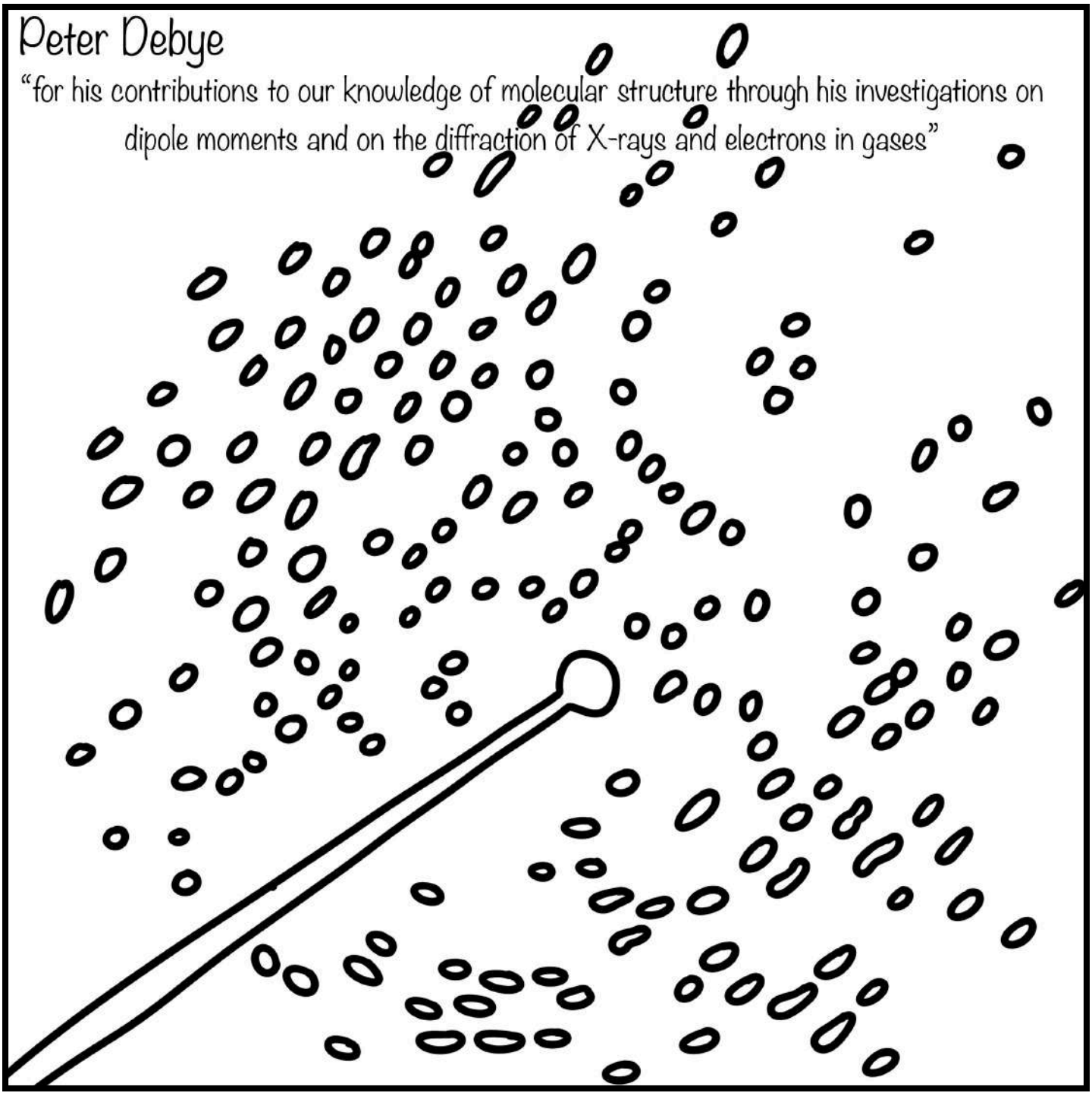
"in recognition of their synthesis of new radioactive elements"



1936 - Color the X-Ray diffraction:

Peter Debye

"for his contributions to our knowledge of molecular structure through his investigations on dipole moments and on the diffraction of X-rays and electrons in gases"



1937 - Color the vitamine C (ascorbic acid):

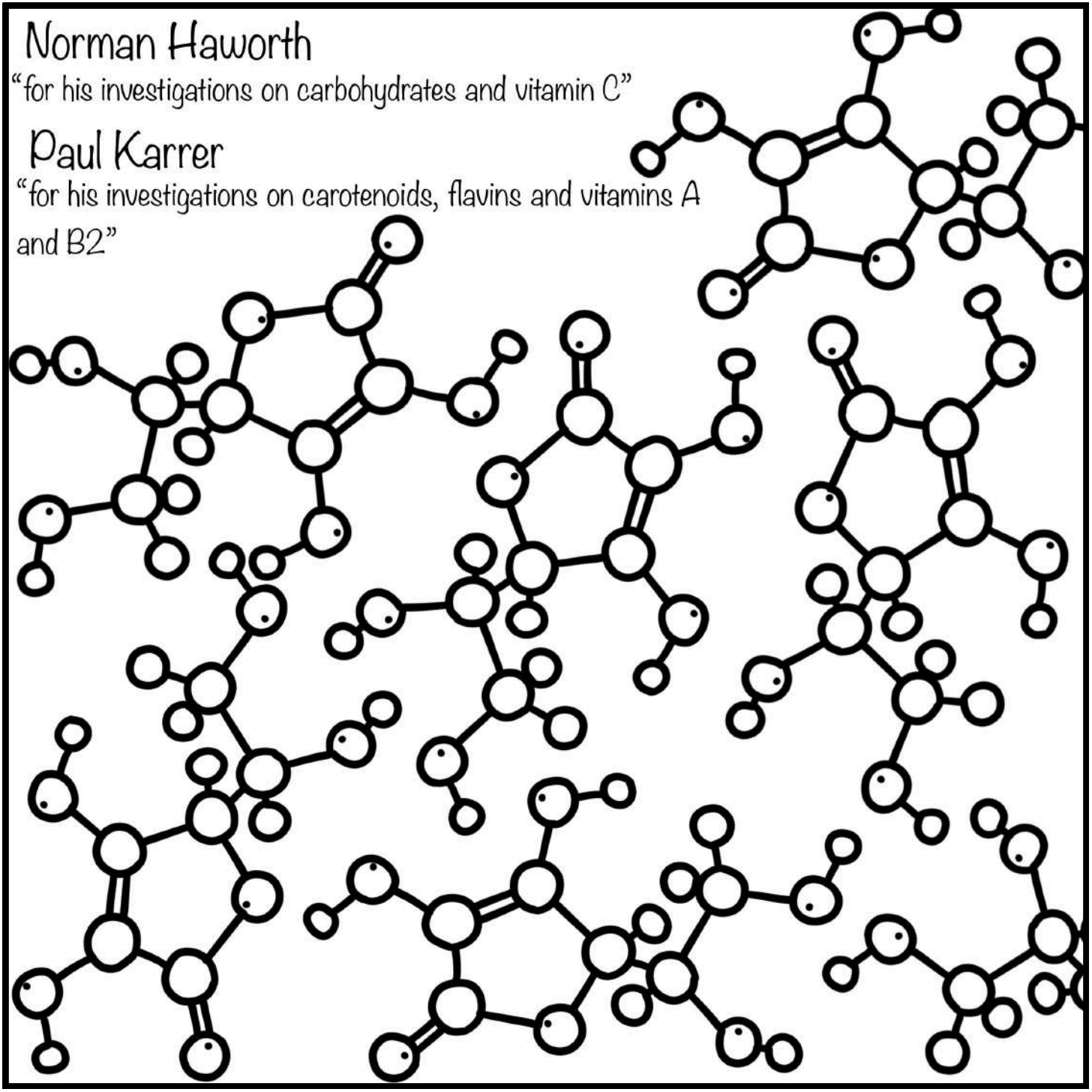
. = oxygen

Norman Haworth

"for his investigations on carbohydrates and vitamin C"

Paul Karrer

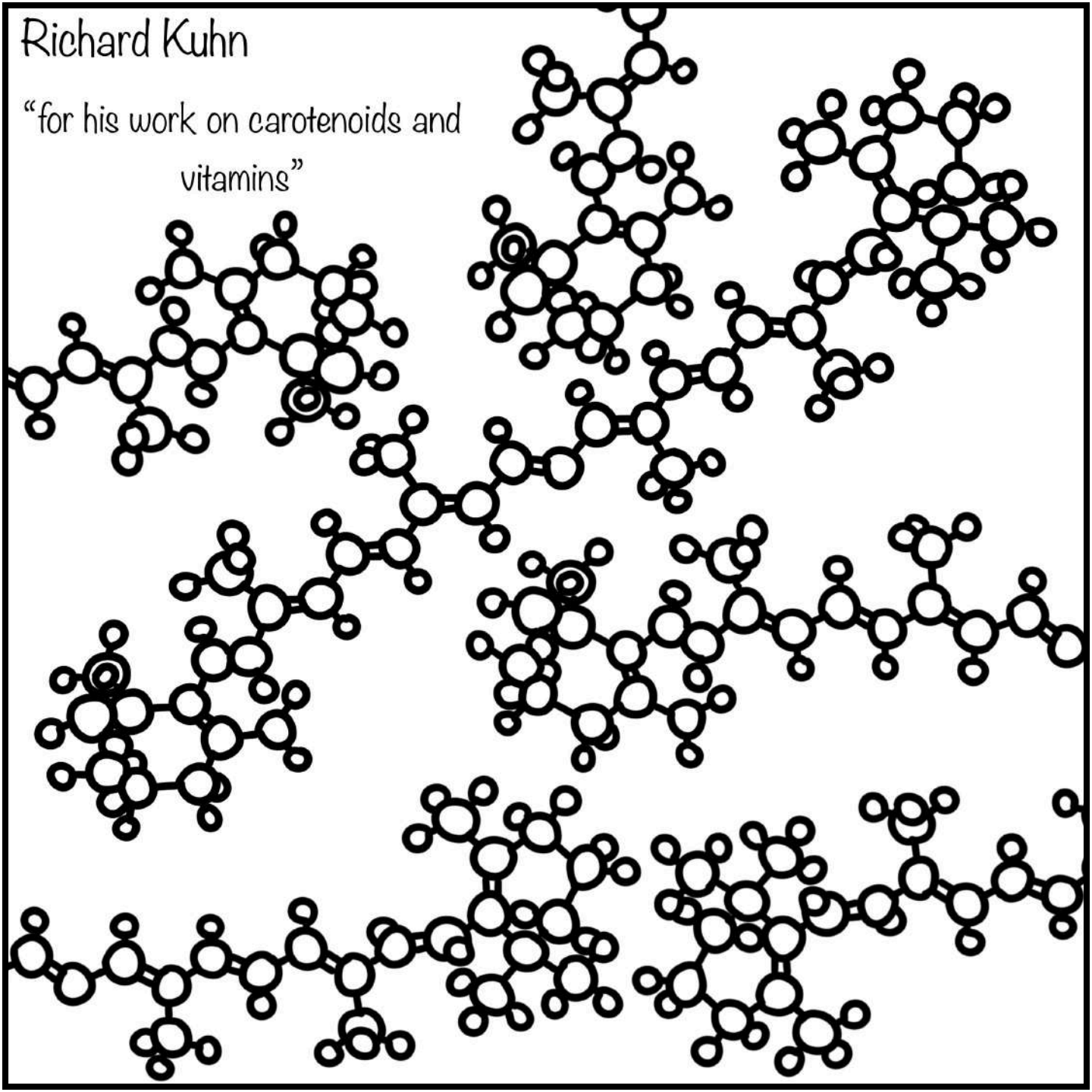
"for his investigations on carotenoids, flavins and vitamins A and B2"



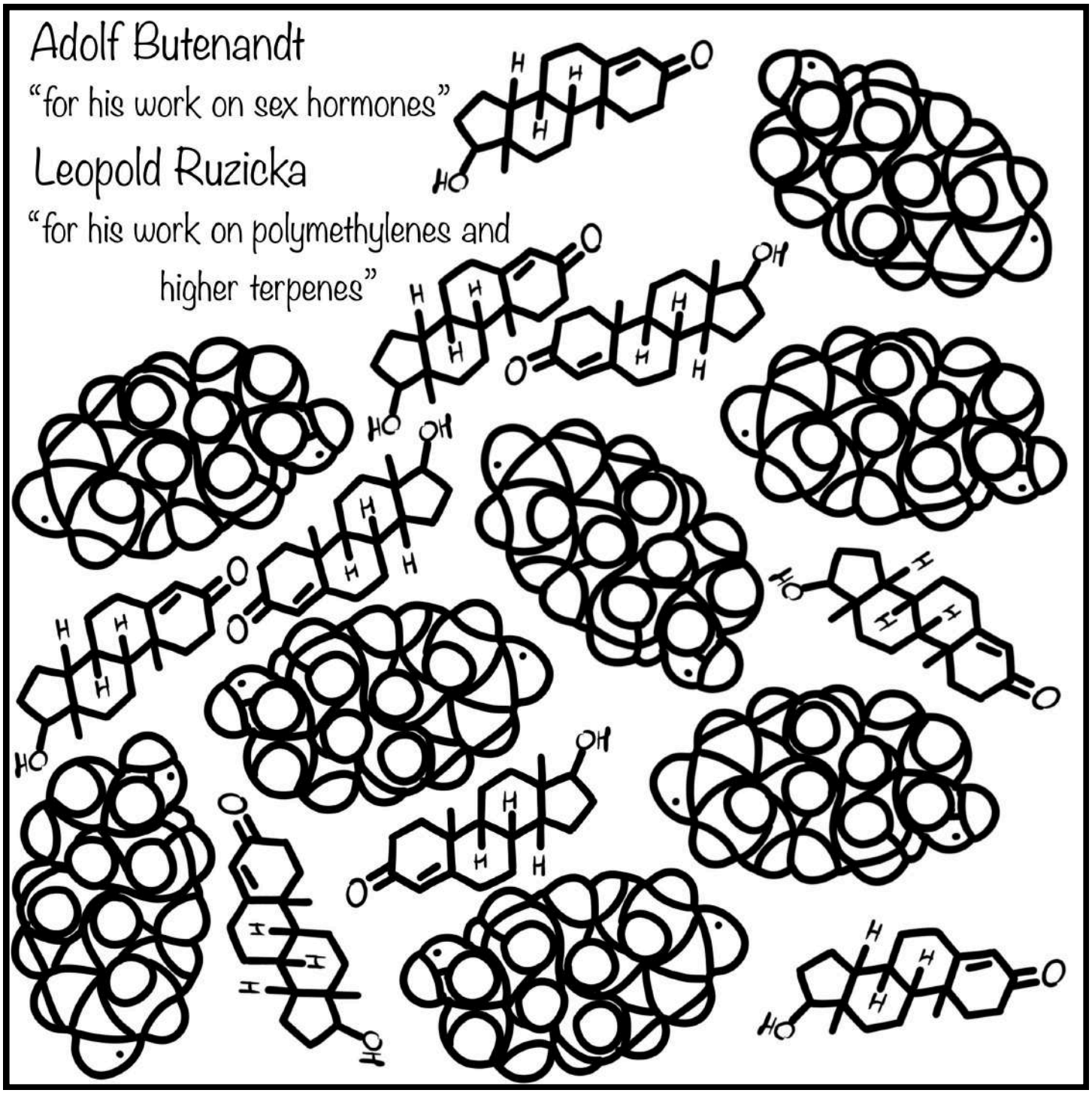
1938 - Color the β-carotene:

Richard Kuhn

"for his work on carotenoids and vitamins"



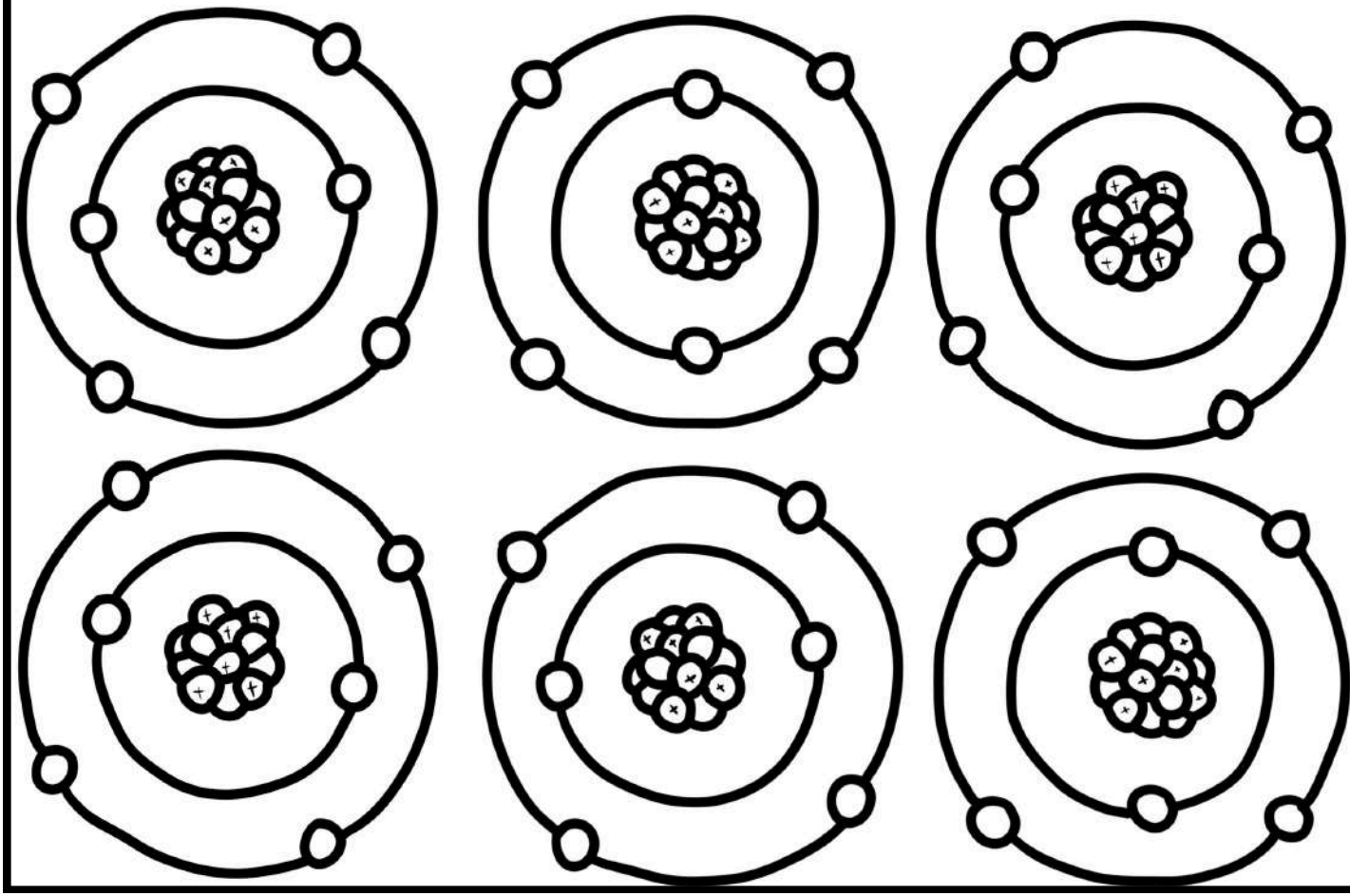
1939 - Color the estradiol and testosterone:


Adolf Butenandt
"for his work on sex hormones"
Leopold Ruzicka
"for his work on polymethylenes and higher terpenes"

1943 - Color the carbon isotopes:

George de Hevesy

"for his work on the use of isotopes as tracers in the study of chemical processes"



1944 - Color the nuclear fission:

Otto Hahn

"for his discovery of the fission of heavy nuclei"

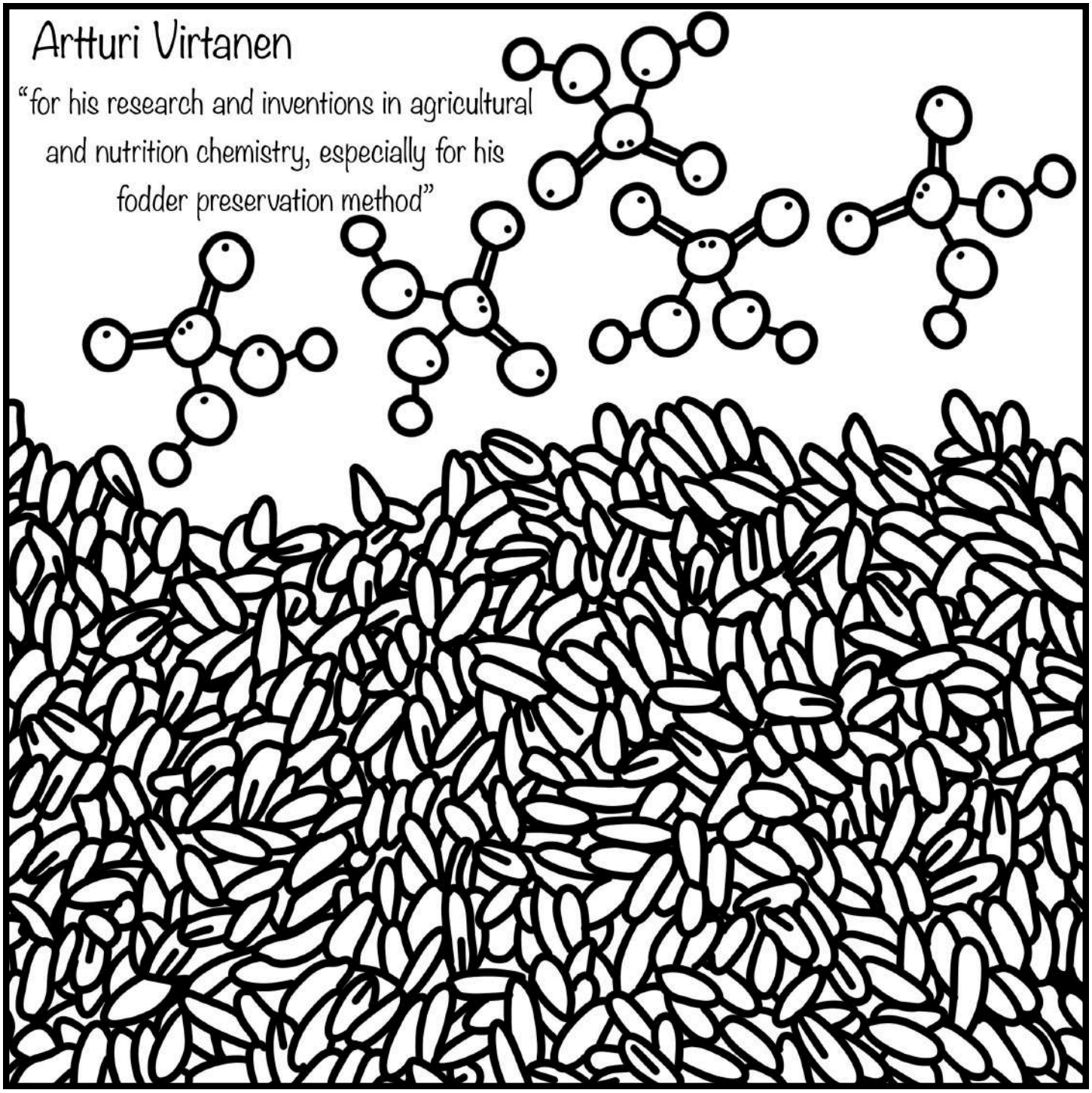
1945 - Color the sulfuric acid and the food grains:

. = oxygen

.. = sulfur

Artturi Virtanen

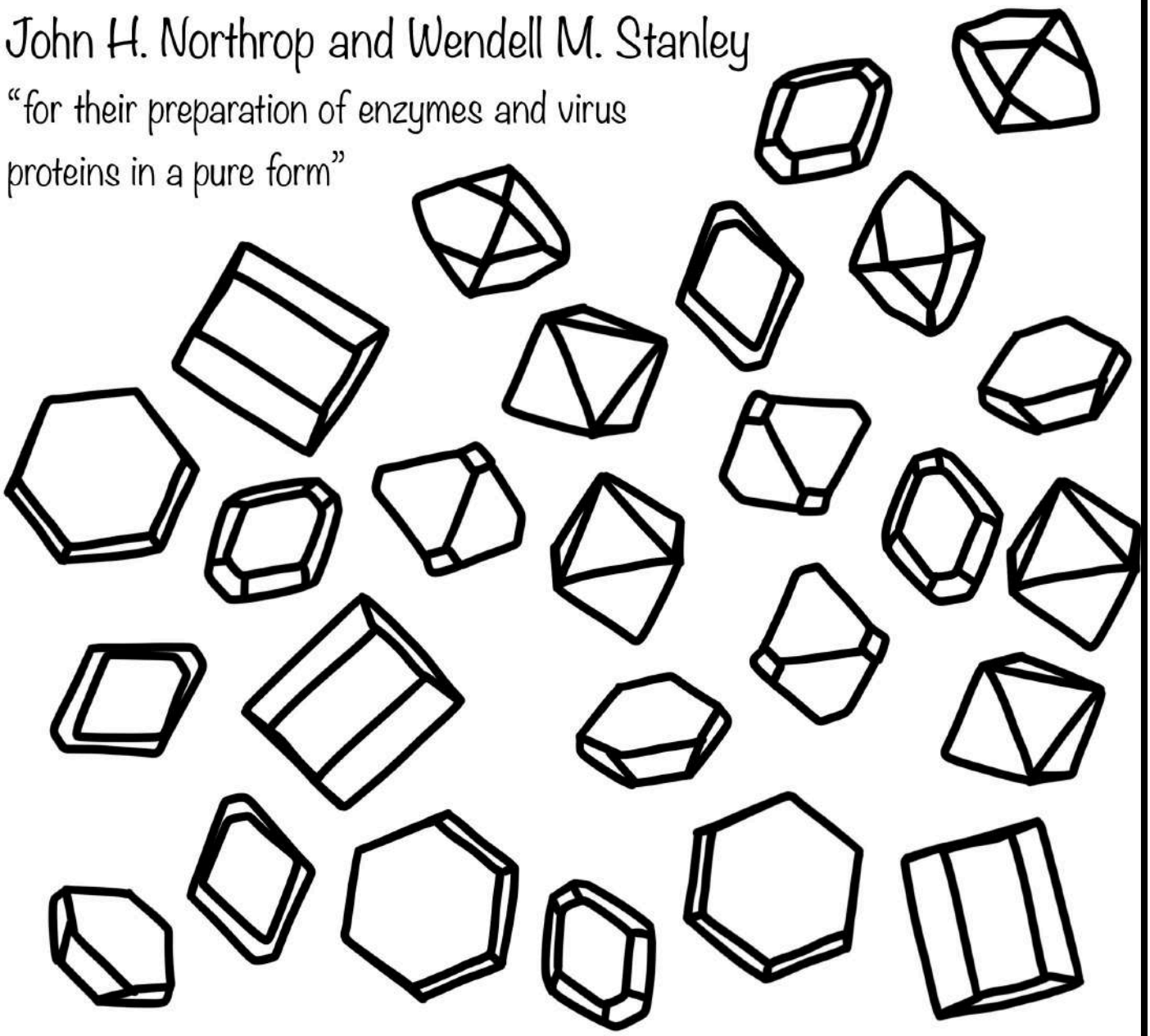
"for his research and inventions in agricultural and nutrition chemistry, especially for his fodder preservation method"



1946 - Color the crystals:

James B. Sumner "for his discovery that enzymes can be crystallized"

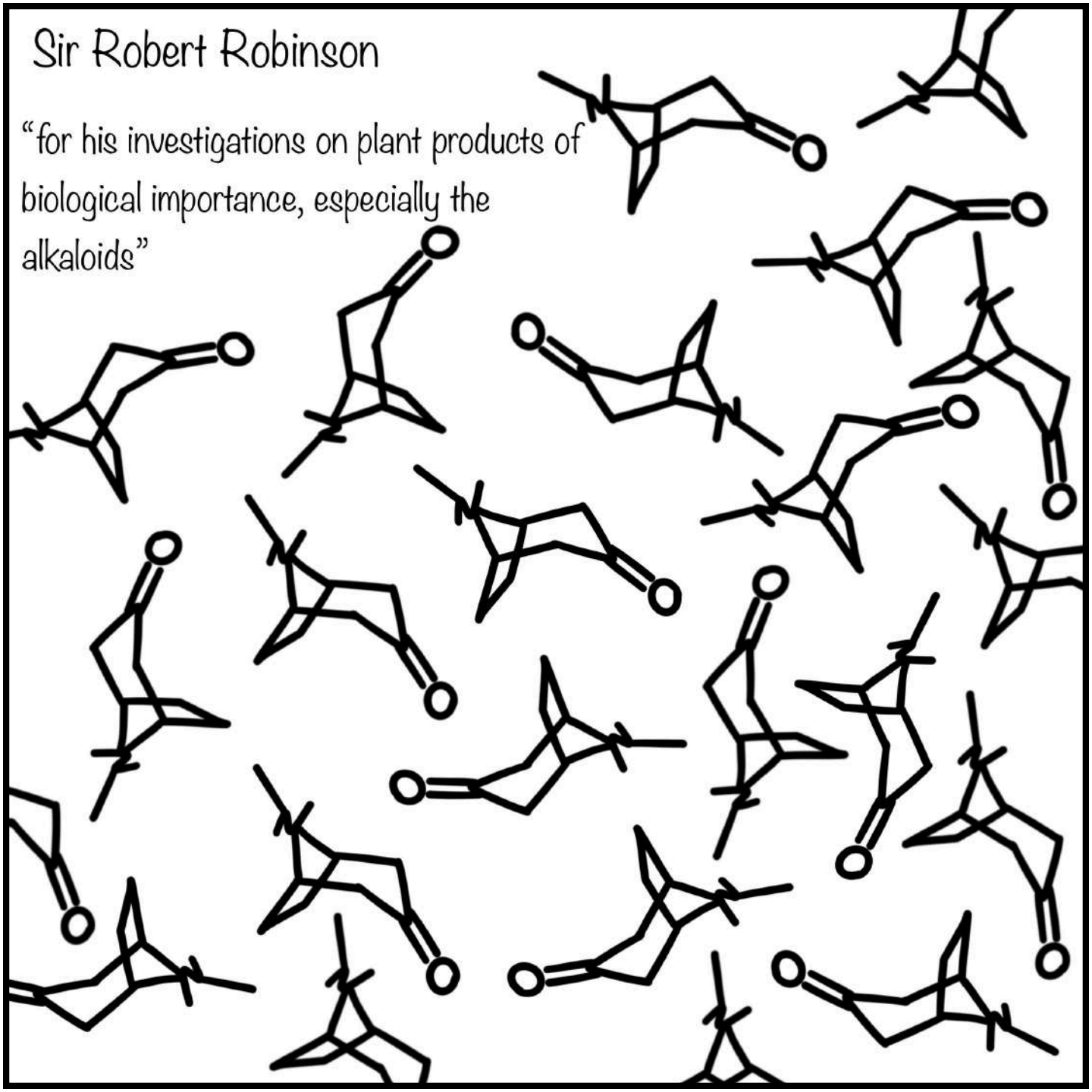
John H. Northrop and Wendell M. Stanley "for their preparation of enzymes and virus proteins in a pure form"



1947 - Color the tropinone:

Sir Robert Robinson

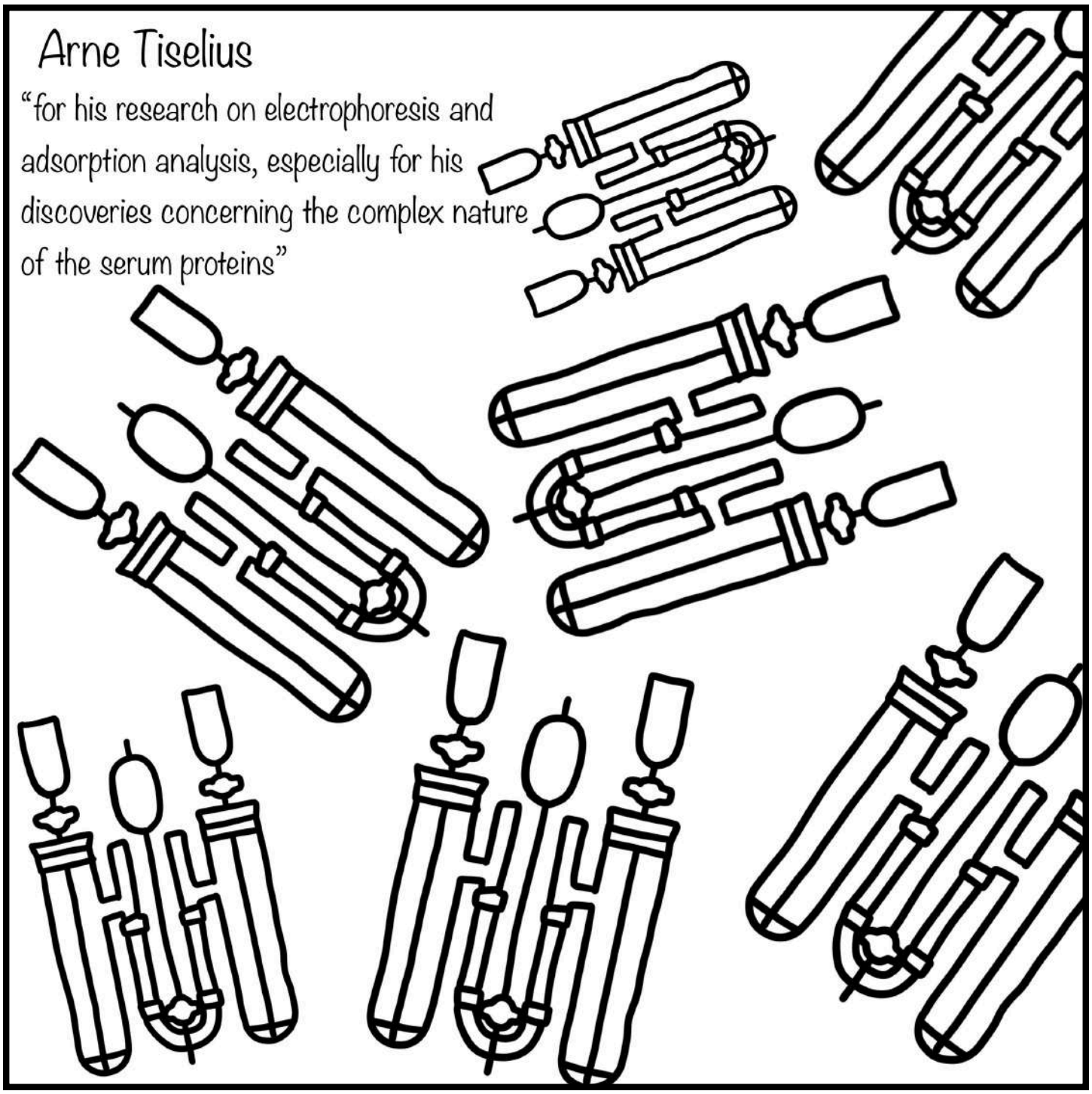
"for his investigations on plant products of biological importance, especially the alkaloids"



1948 - Color the Teselius’ electrophoresis instrument:

Arne Tiselius

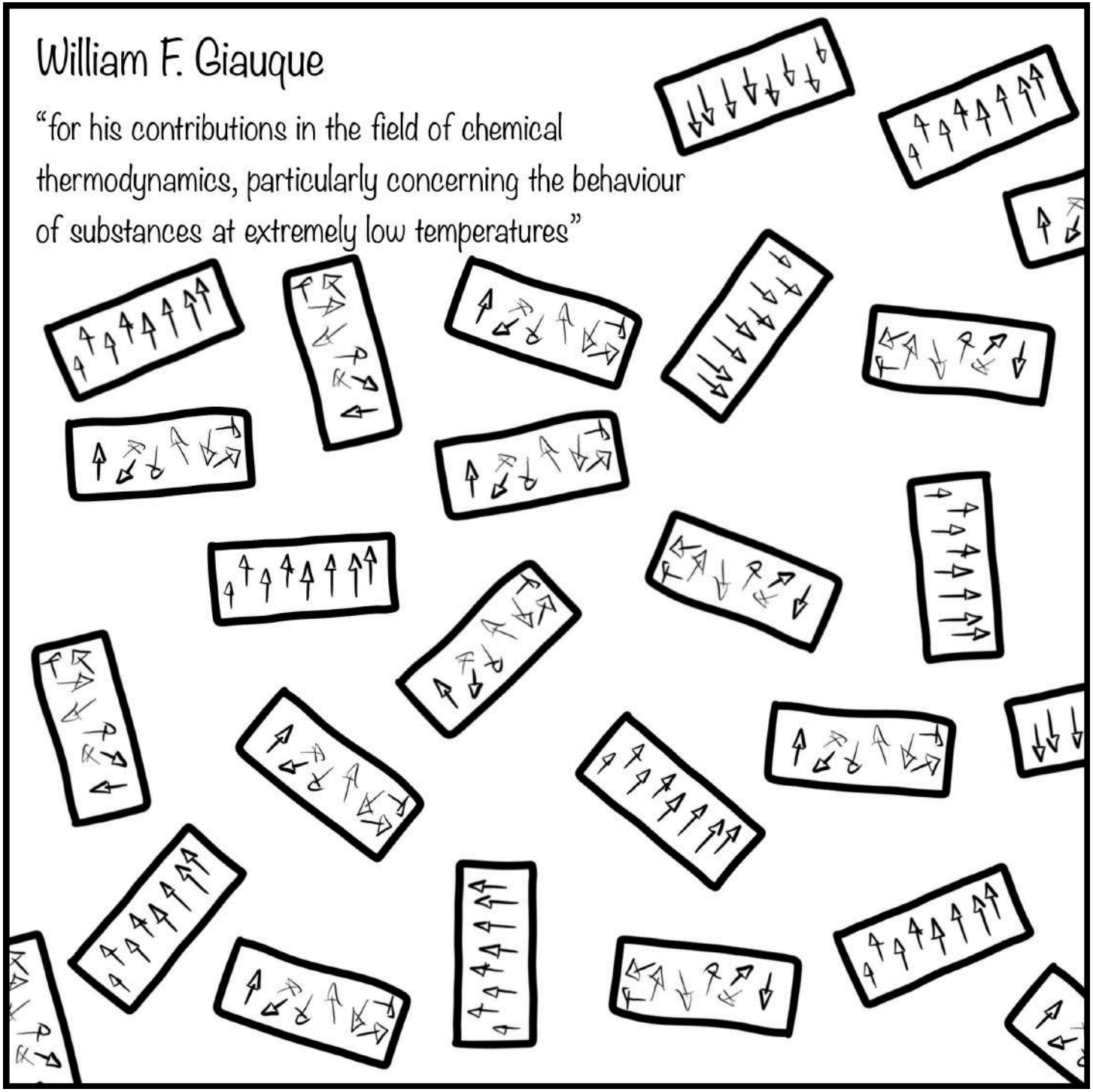
"for his research on electrophoresis and adsorption analysis, especially for his discoveries concerning the complex nature of the serum proteins"



1949 - Color the “refrigerator”:

William F. Giauque

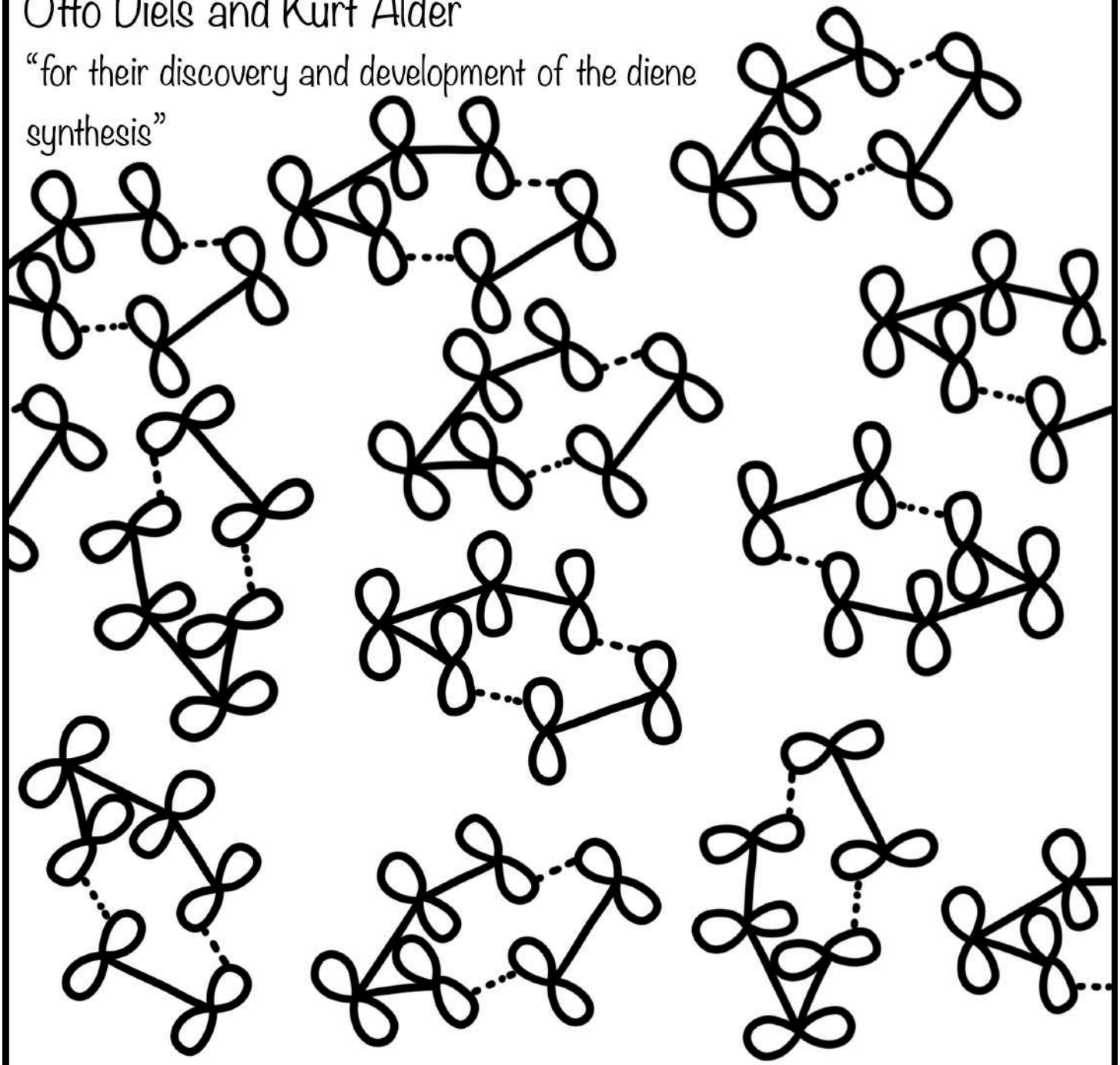
"for his contributions in the field of chemical thermodynamics, particularly concerning the behaviour of substances at extremely low temperatures"



1950 - Color the Diels-Alder reaction:

Otto Diels and Kurt Alder

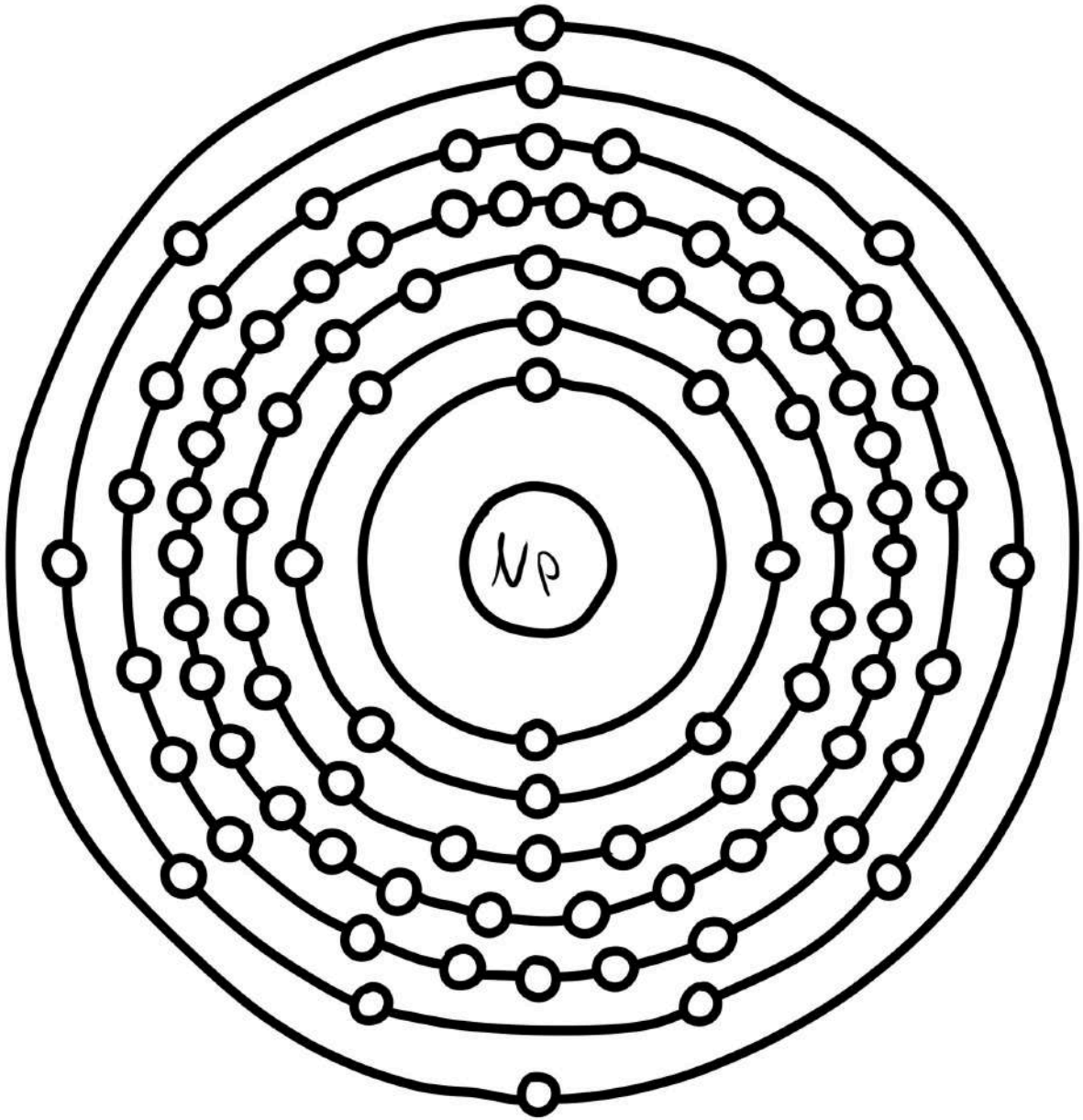
"for their discovery and development of the diene synthesis"



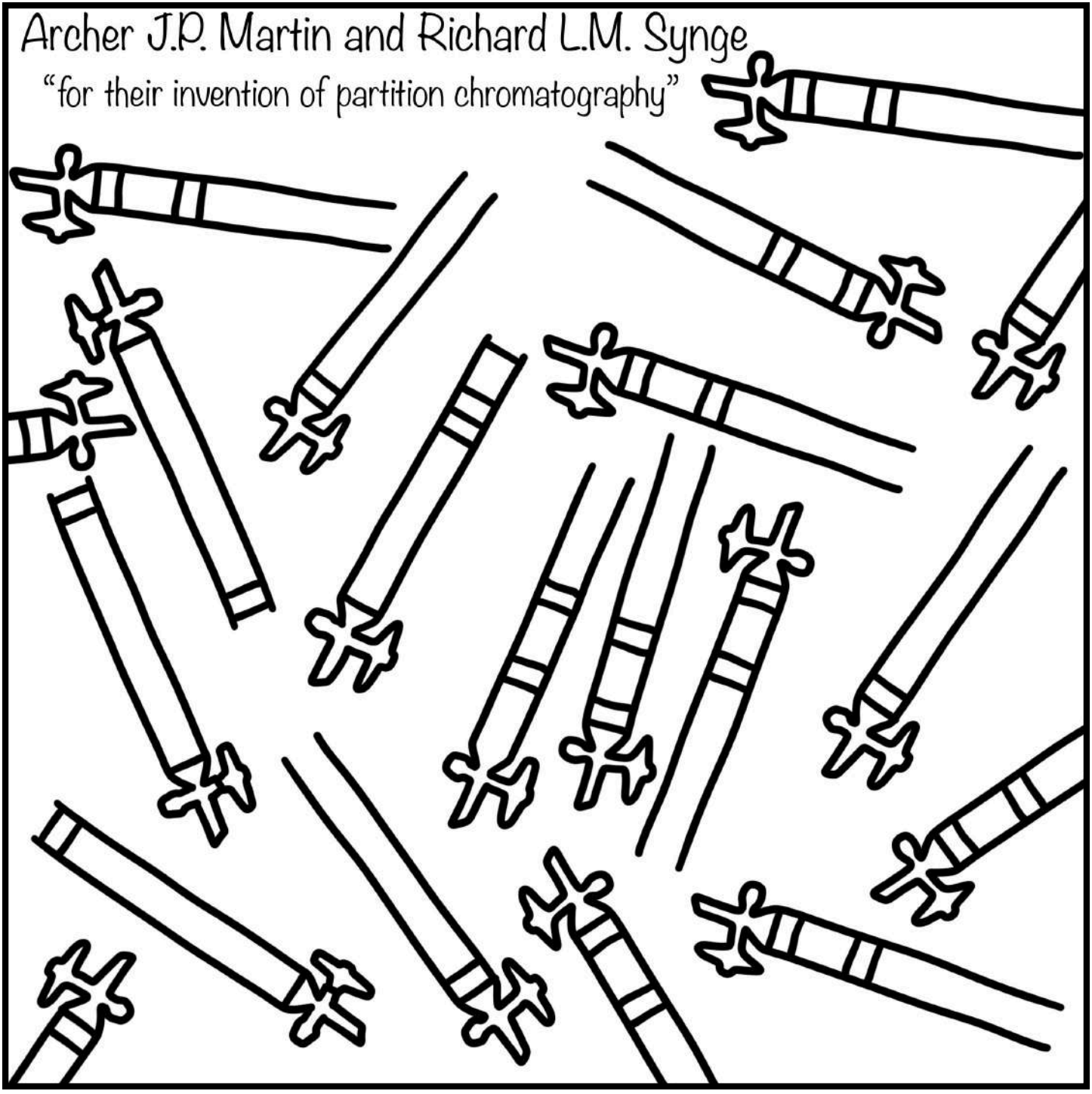
1951 - Color the neptunium:

Edwin M. McMillan and Glenn T. Seaborg

"for their discoveries in the chemistry of the transuranium elements"



1952 - Color the chromatographic columns:


Archer J.P. Martin and Richard L.M. Synge
"for their invention of partition chromatography"

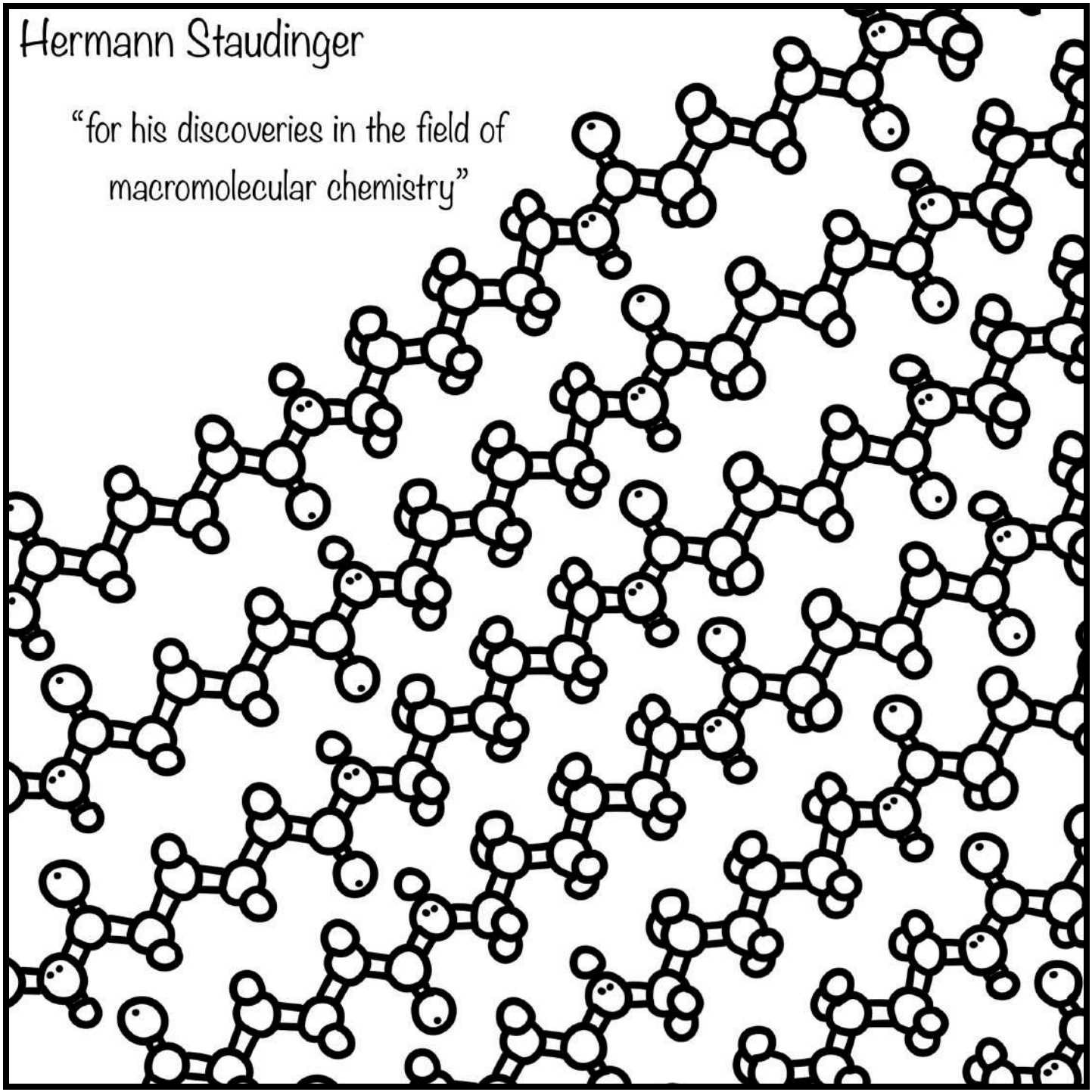
1953 - Color the polymer:

. = oxygen

.. = nitrogen

Hermann Staudinger

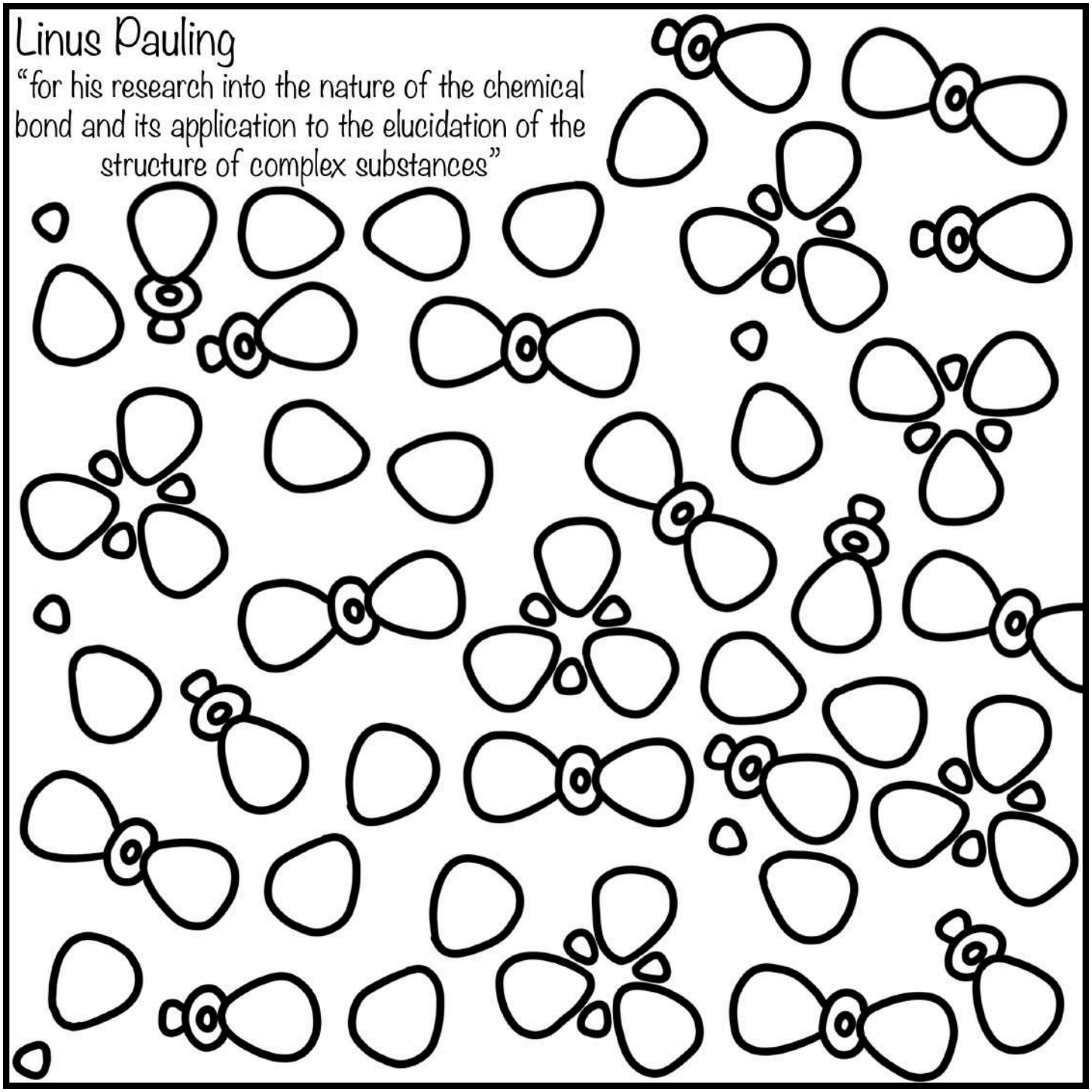
"for his discoveries in the field of macromolecular chemistry"



1954 - Color the orbitals:

Linus Pauling

"for his research into the nature of the chemical bond and its application to the elucidation of the structure of complex substances"



1955 - Color the oxytocin:

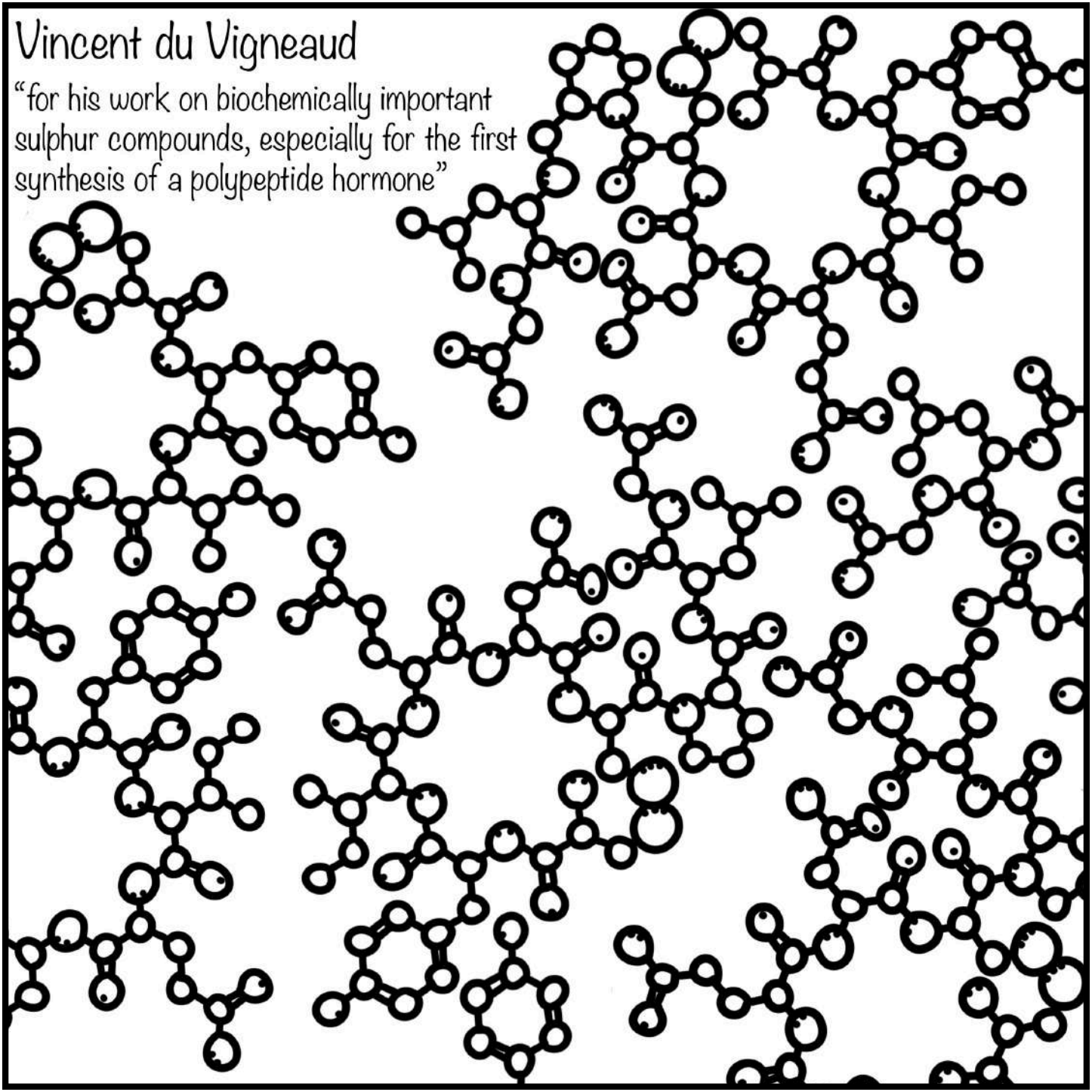
. = oxygen

.. = nitrogen

... = sulfur

Vincent du Vigneaud

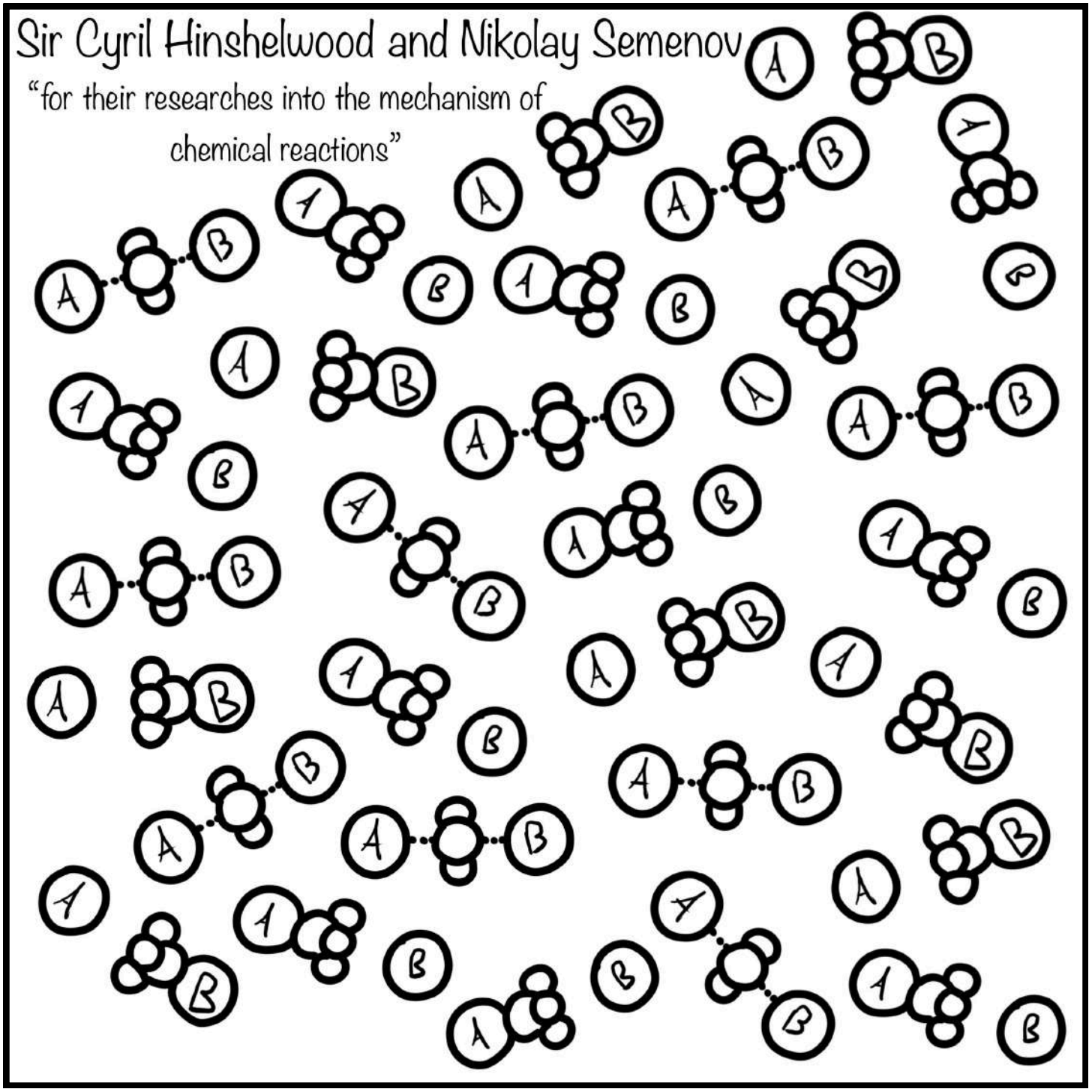
"for his work on biochemically important sulphur compounds, especially for the first synthesis of a polypeptide hormone"



1956 - Color the S_N2 reaction mechanism:

Sir Cyril Hinshelwood and Nikolay Semenov

"for their researches into the mechanism of chemical reactions"



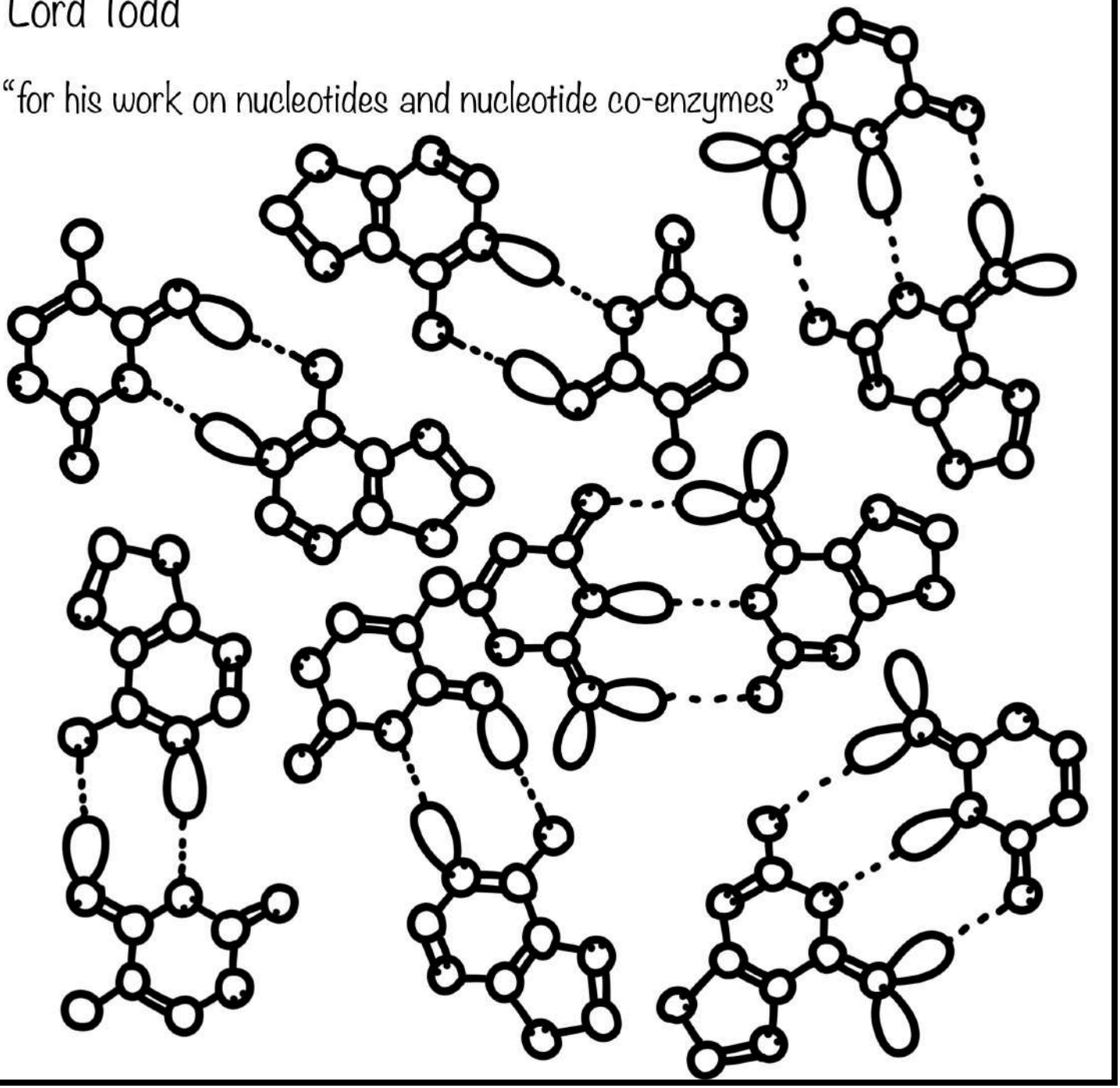
1957 - Color the base pairs:

. = oxygen

.. = nitrogen

Lord Todd

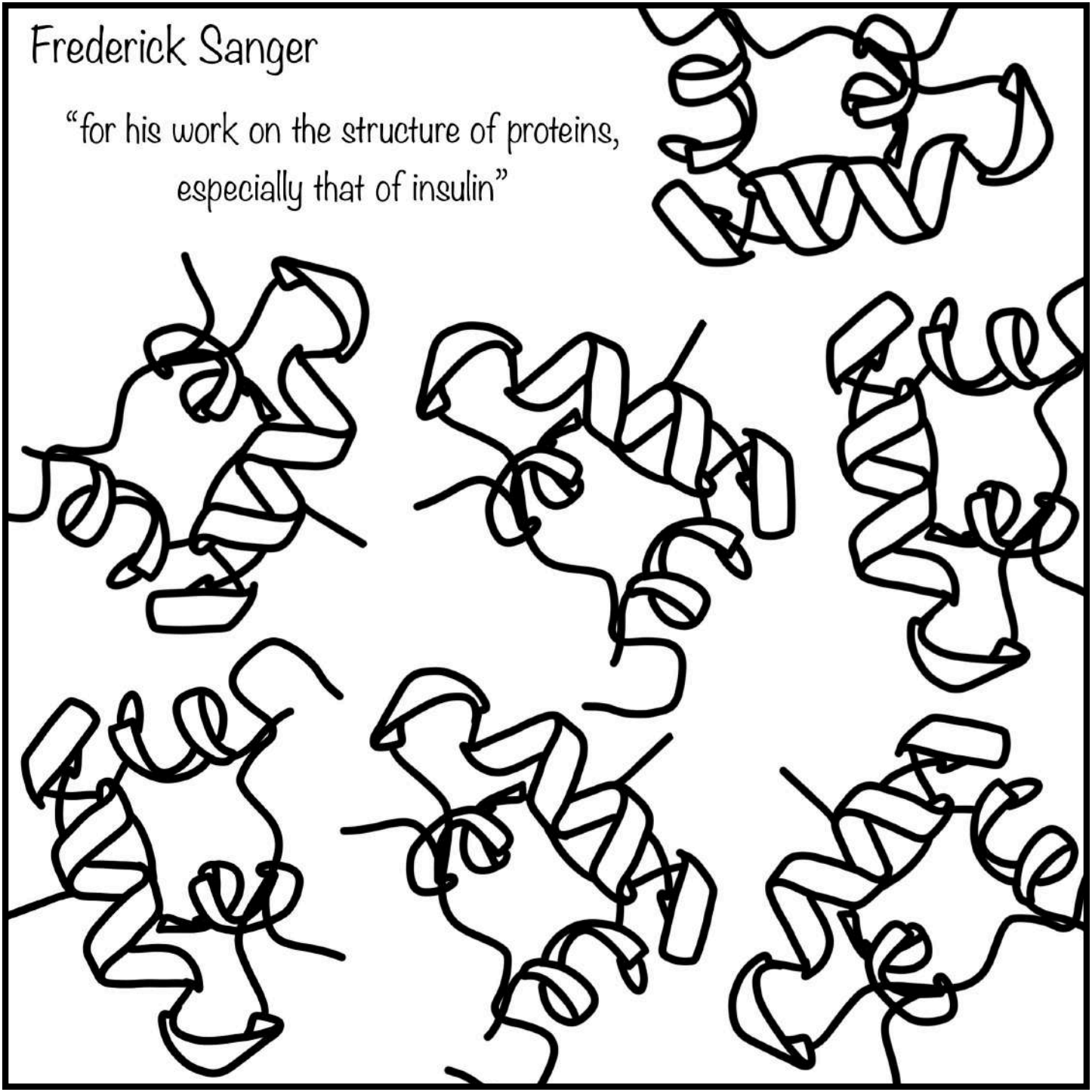
"for his work on nucleotides and nucleotide co-enzymes"



1958 - Color part of the insulin:

Frederick Sanger

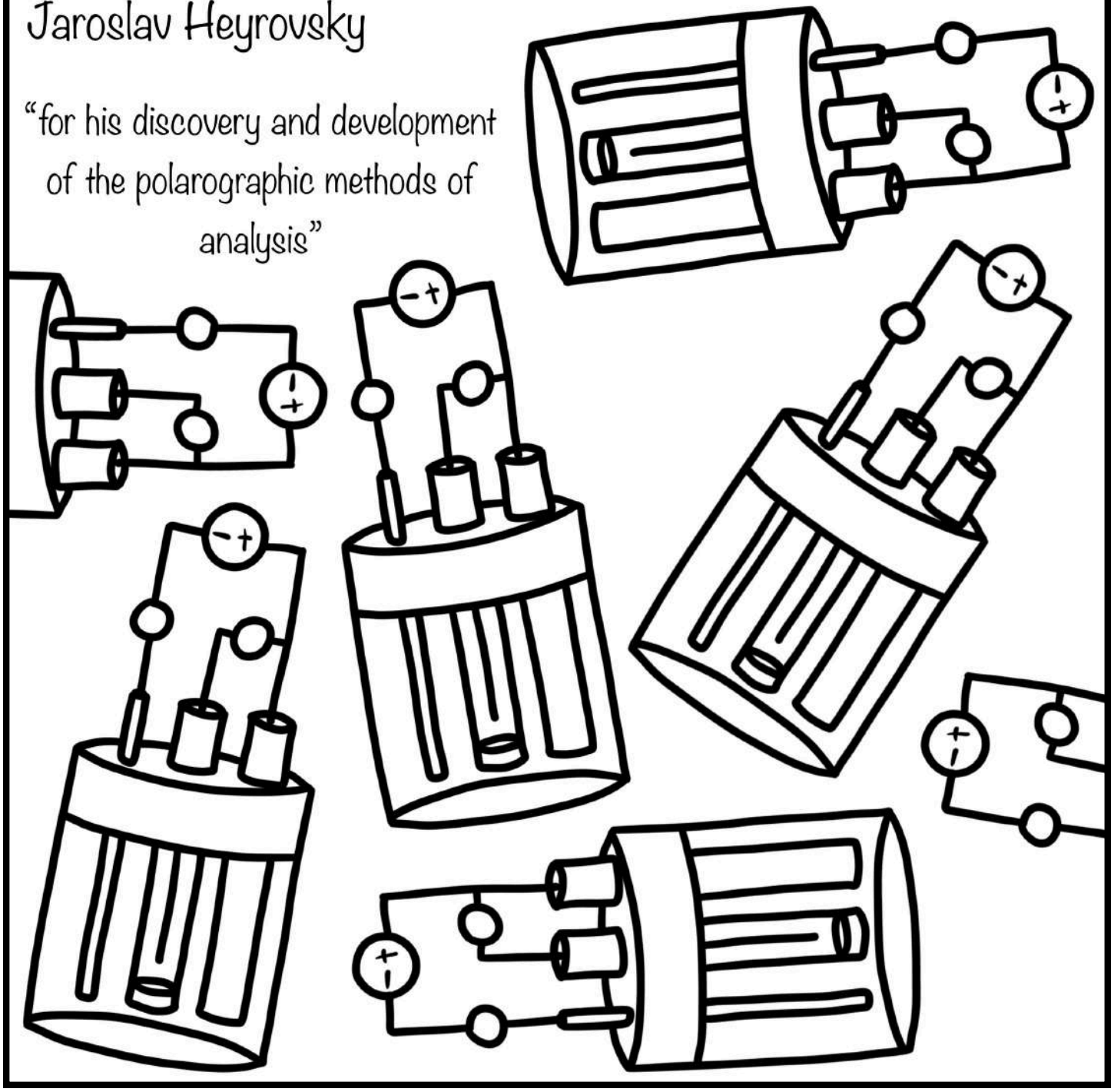
"for his work on the structure of proteins, especially that of insulin"



1959 - Color the electrodes:

Jaroslav Heyrovsky

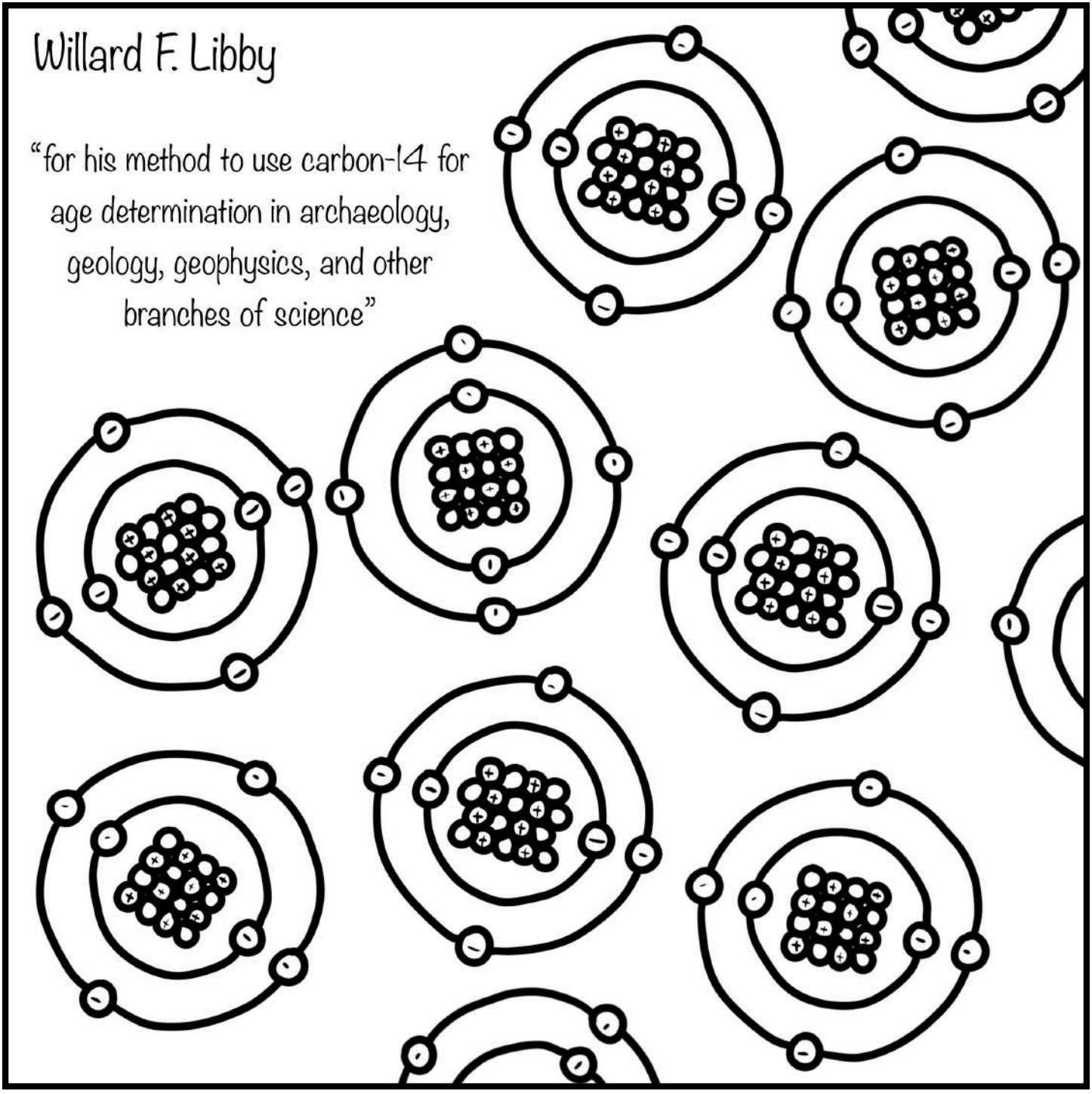
"for his discovery and development of the polarographic methods of analysis"



1960 - Color the carbon isotopes:

Willard F. Libby

"for his method to use carbon-14 for age determination in archaeology, geology, geophysics, and other branches of science"



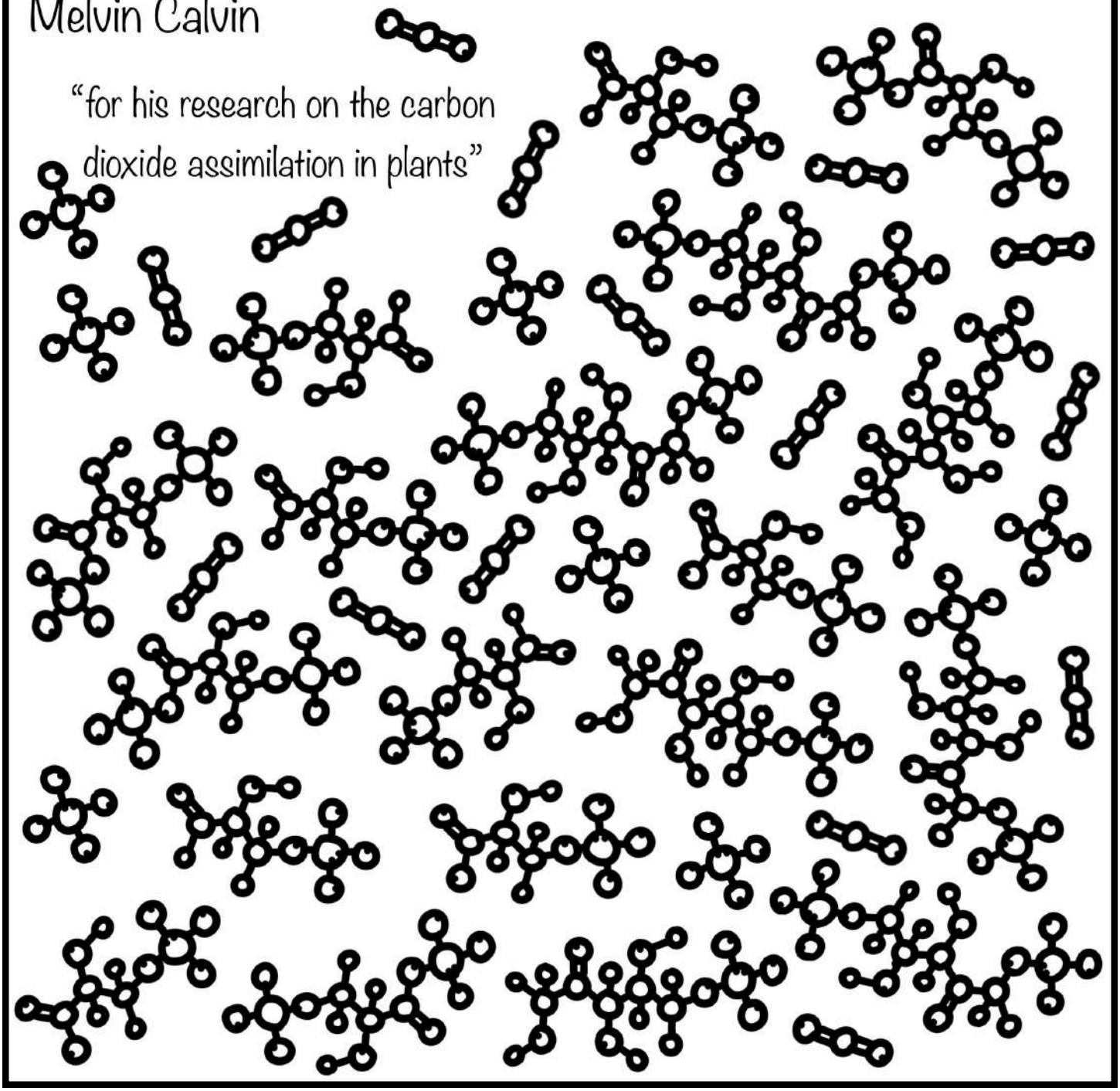
1961 - Color the RuBisCo cycle:

. = oxygen

.. = phosphorus

Melvin Calvin

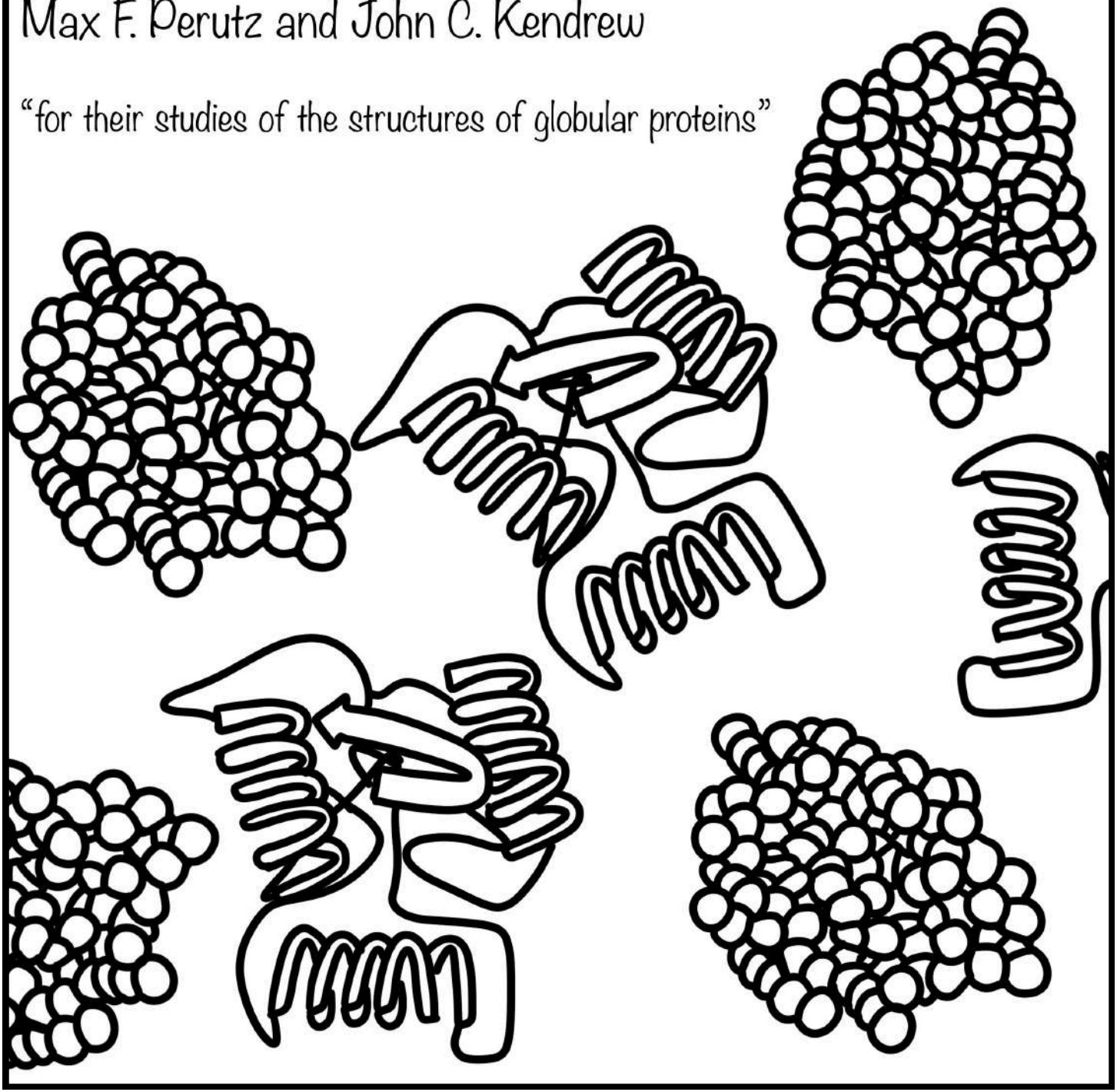
"for his research on the carbon dioxide assimilation in plants"



1962 - Color the globular proteins:

Max F. Perutz and John C. Kendrew

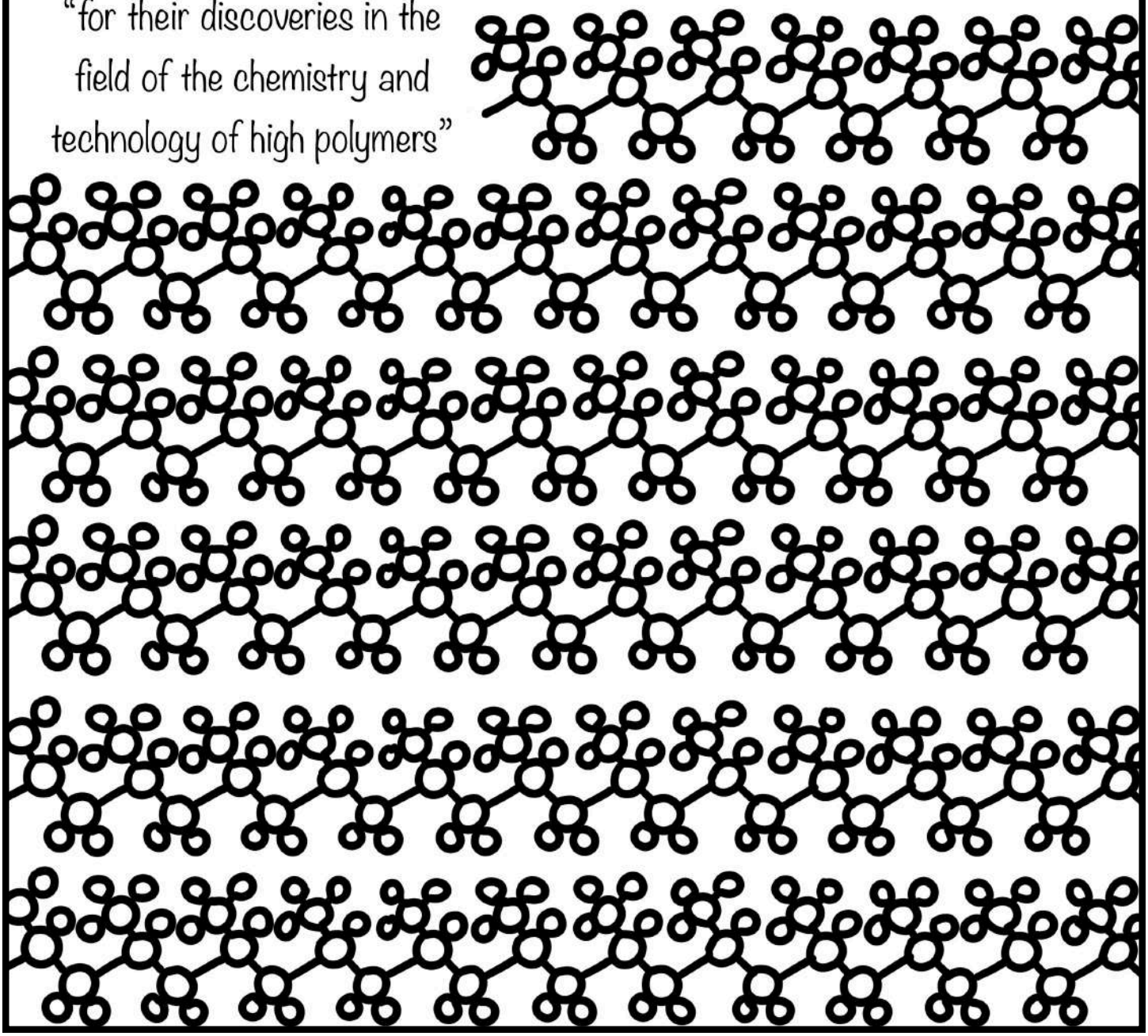
"for their studies of the structures of globular proteins"



1963 - Color the polypropylene:

Karl Ziegler and Giulio Natta

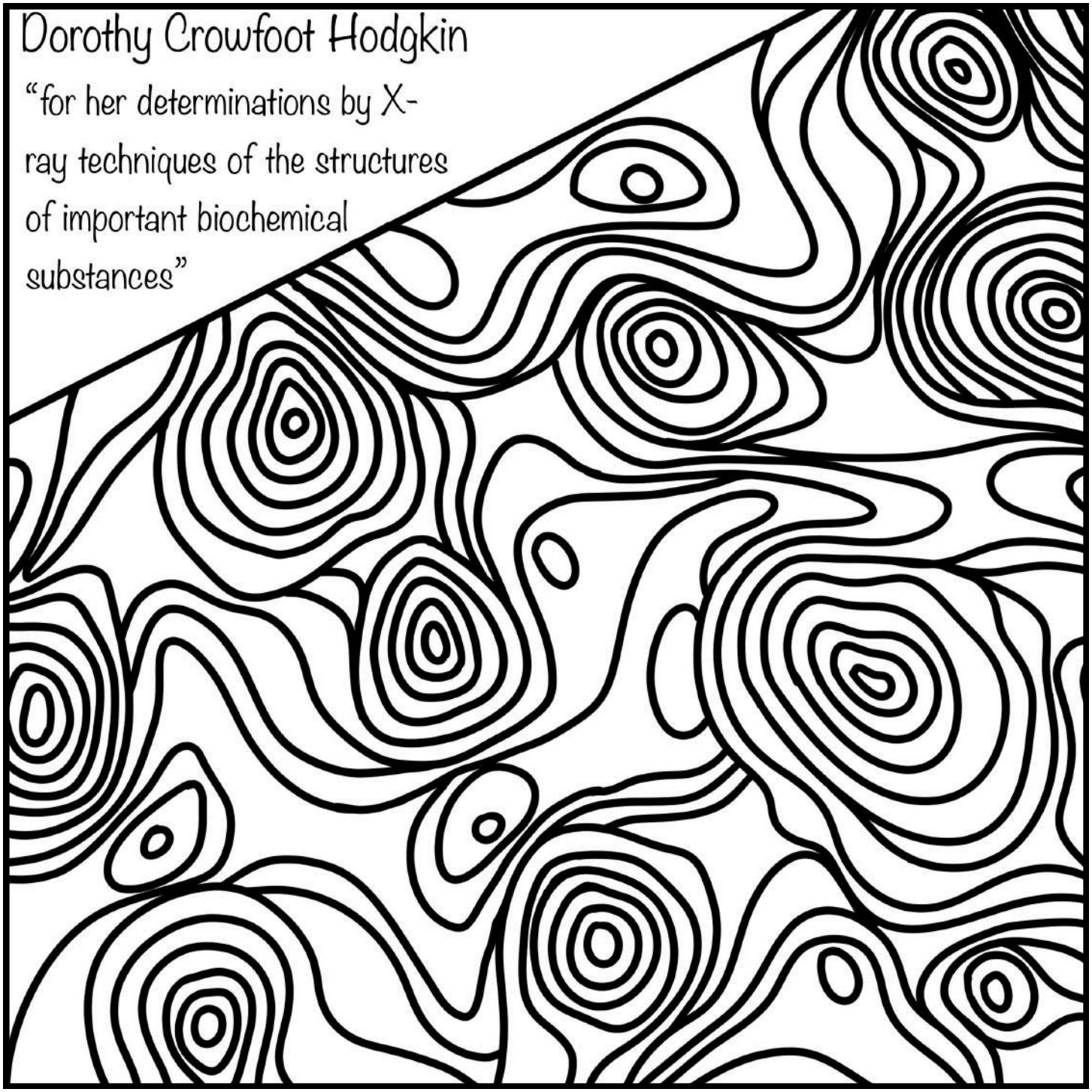
"for their discoveries in the field of the chemistry and technology of high polymers"



1964 - Color part of the X-ray heat map of the insulin:

Dorothy Crowfoot Hodgkin

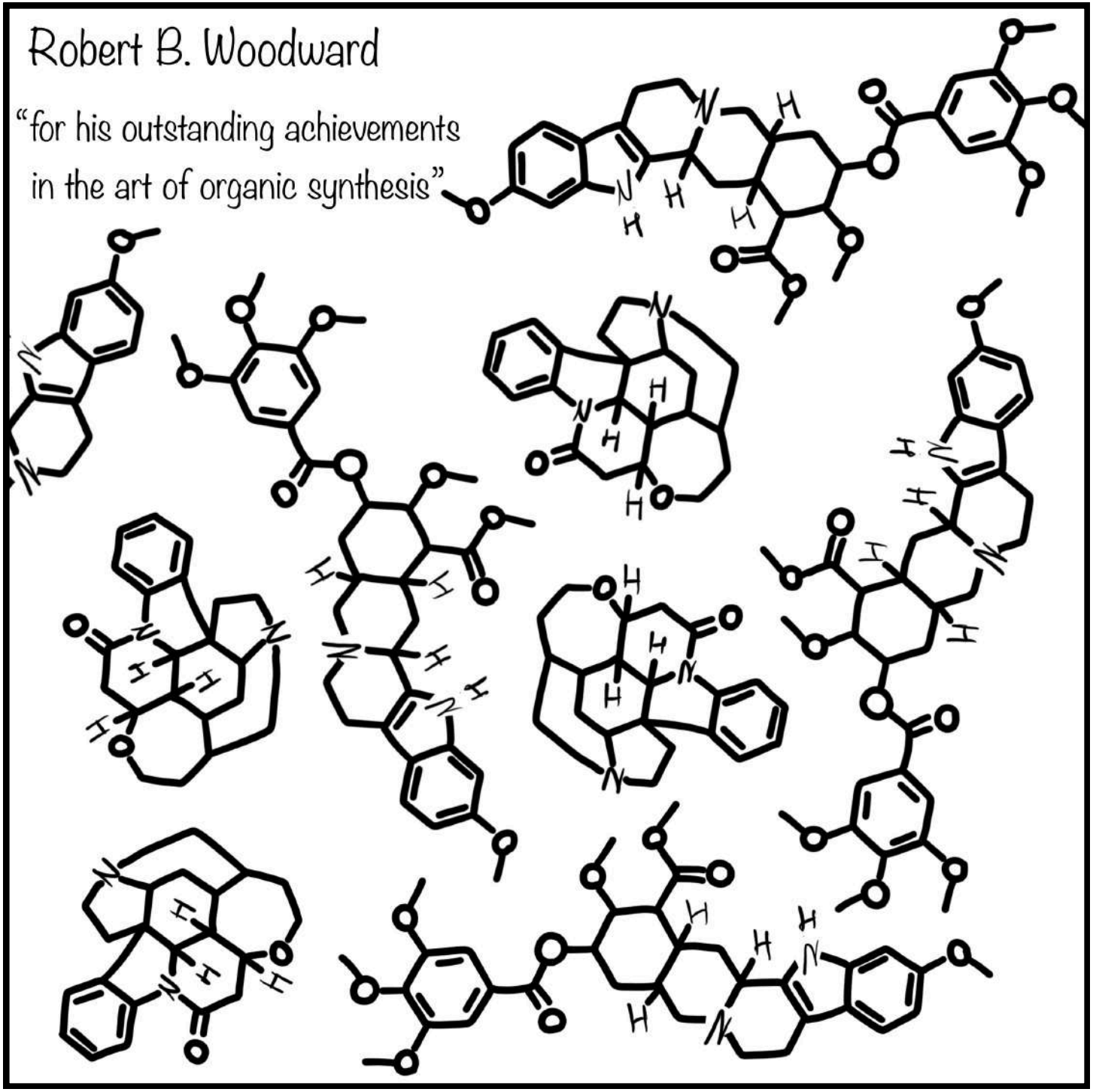
"for her determinations by X-ray techniques of the structures of important biochemical substances"



1965 - Color the reserpine and the strychnine:

Robert B. Woodward

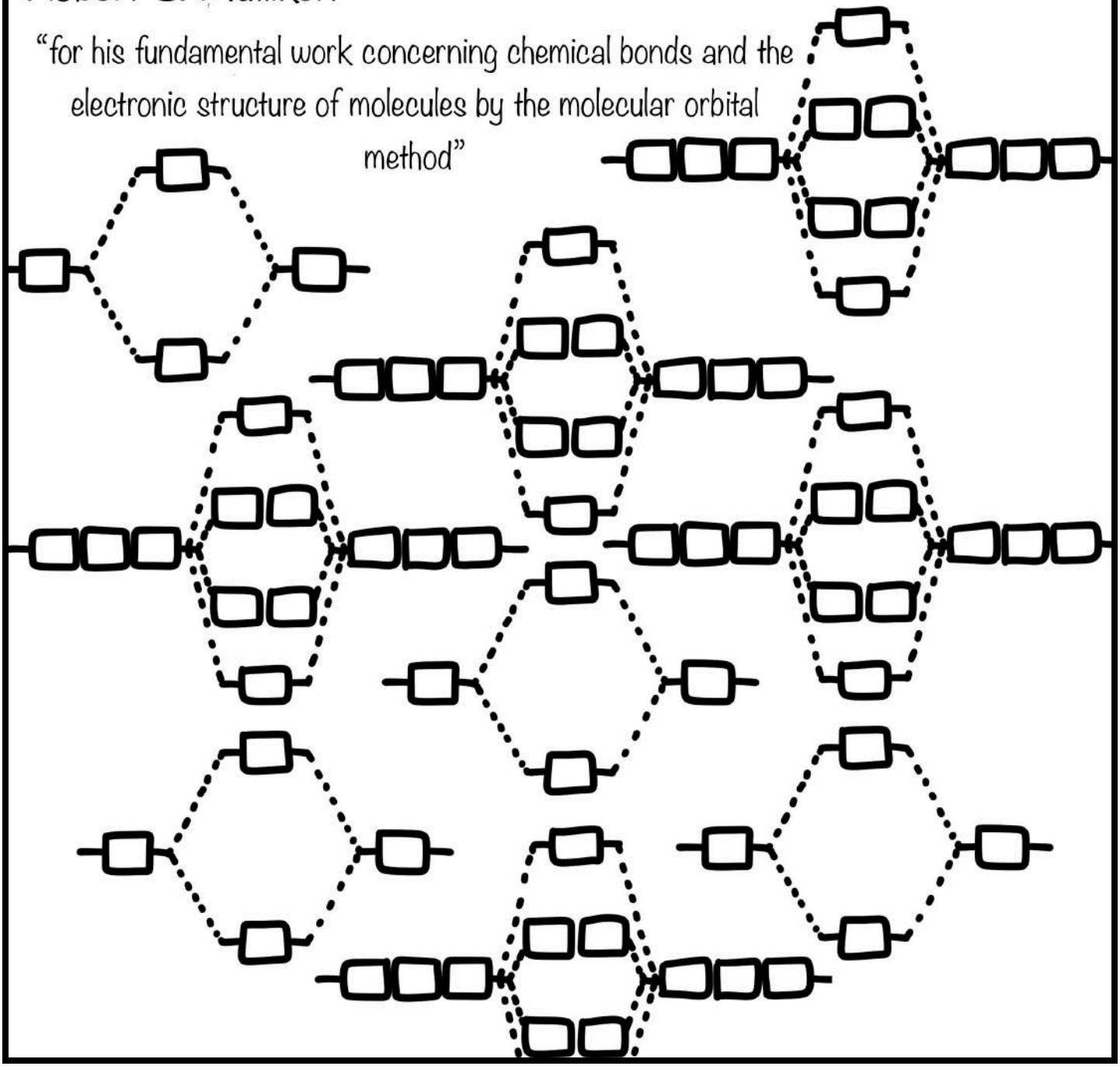
"for his outstanding achievements in the art of organic synthesis"



1966 - Color the molecular orbitals:

Robert S. Mulliken

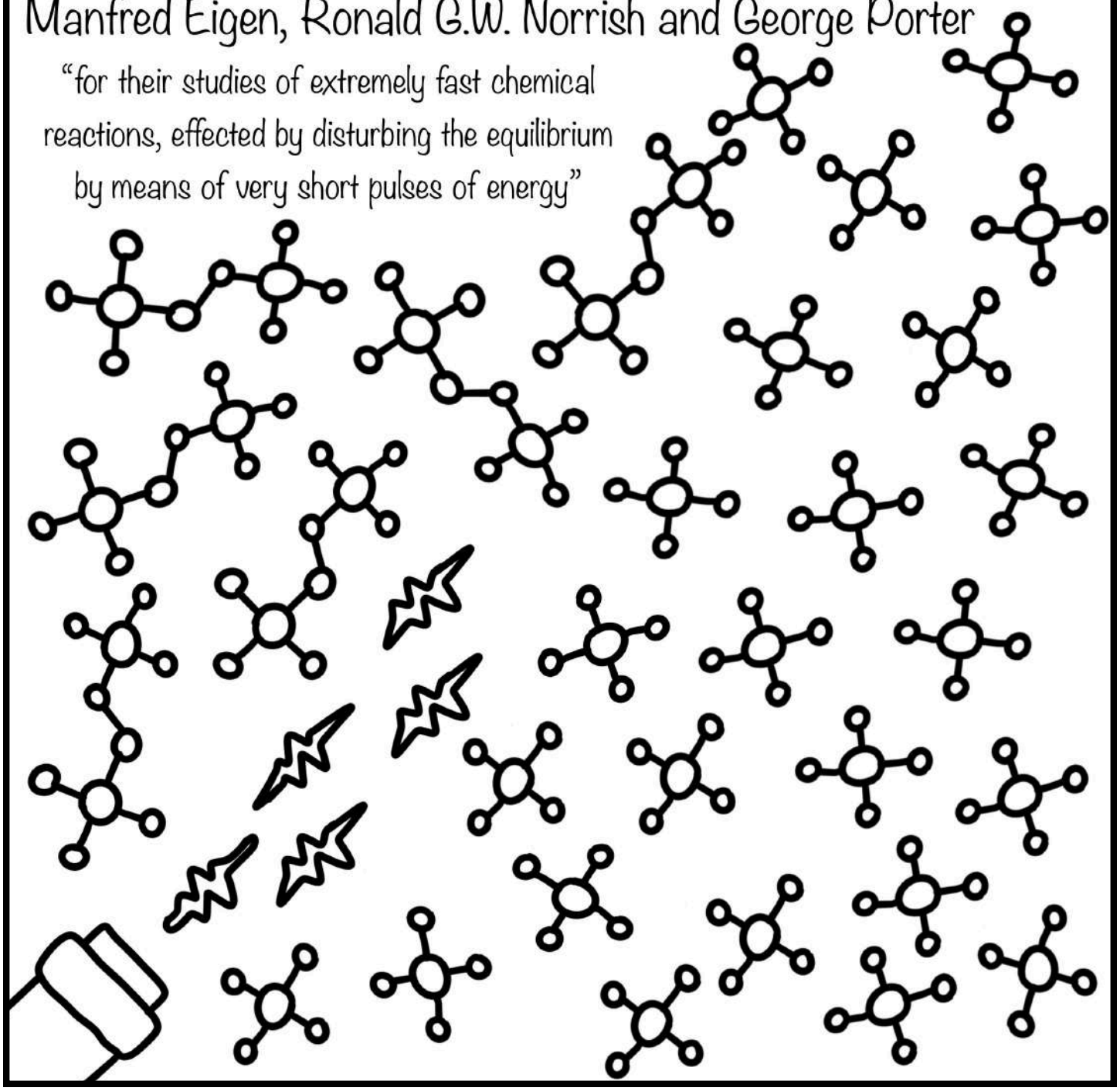
"for his fundamental work concerning chemical bonds and the electronic structure of molecules by the molecular orbital method"



1967 - Color the femtochemistry:

Manfred Eigen, Ronald G.W. Norrish and George Porter

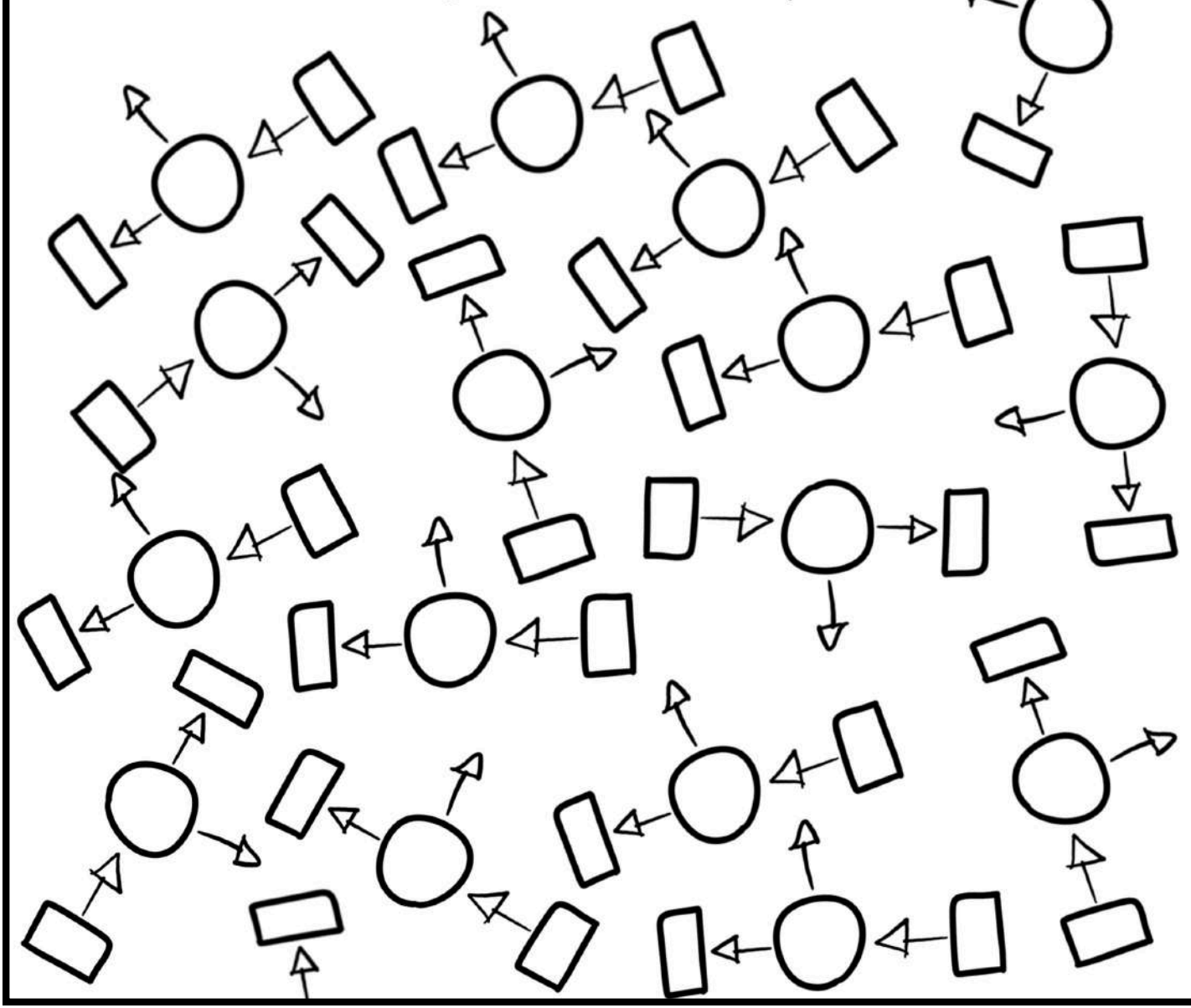
"for their studies of extremely fast chemical reactions, effected by disturbing the equilibrium by means of very short pulses of energy"



1968 - Color the thermodynamic scheme:

Lars Onsager

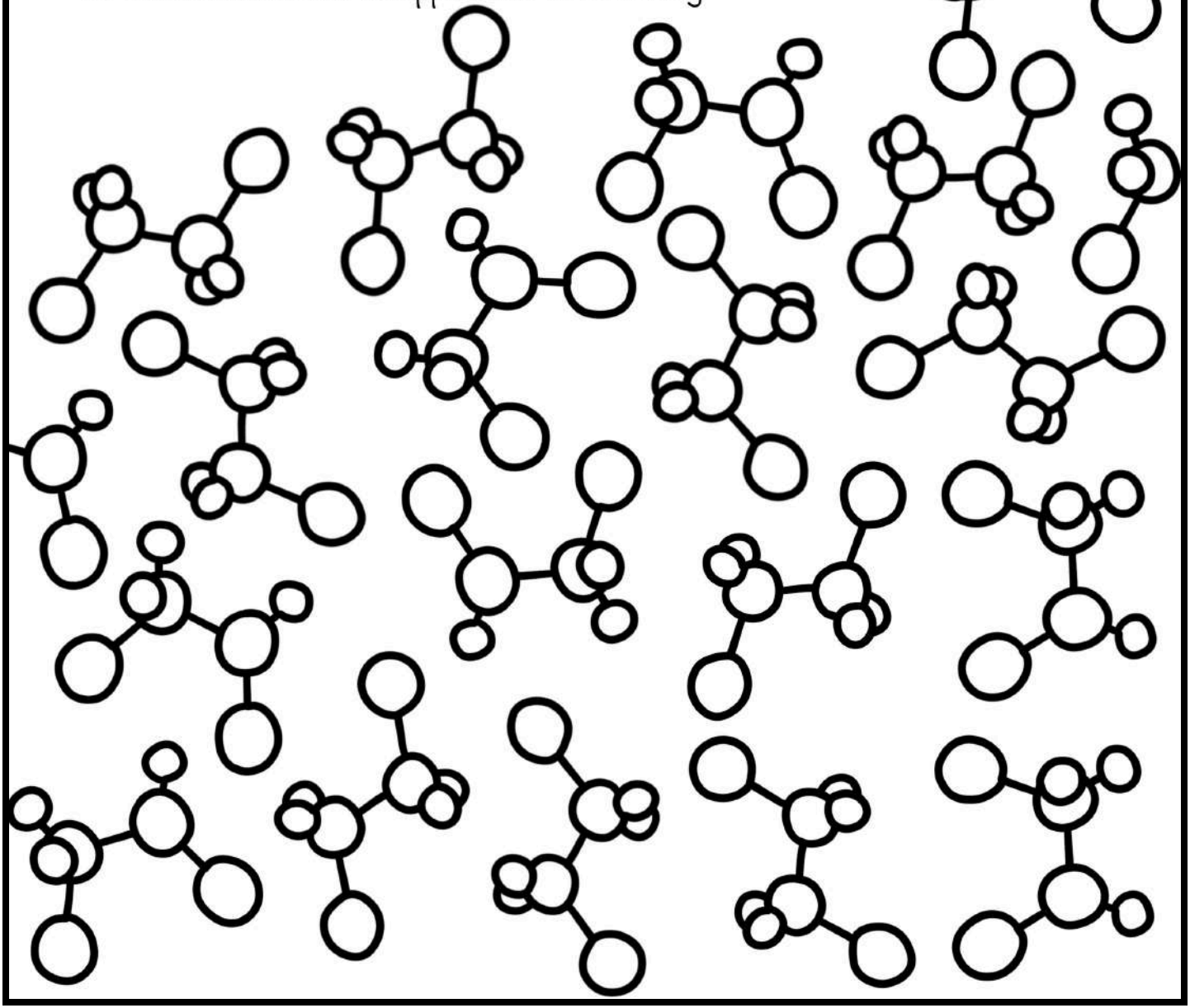
"for the discovery of the reciprocal relations bearing his name, which are fundamental for the thermodynamics of irreversible processes"



1969 - Color the conformers:

Derek Barton and Odd Hassel

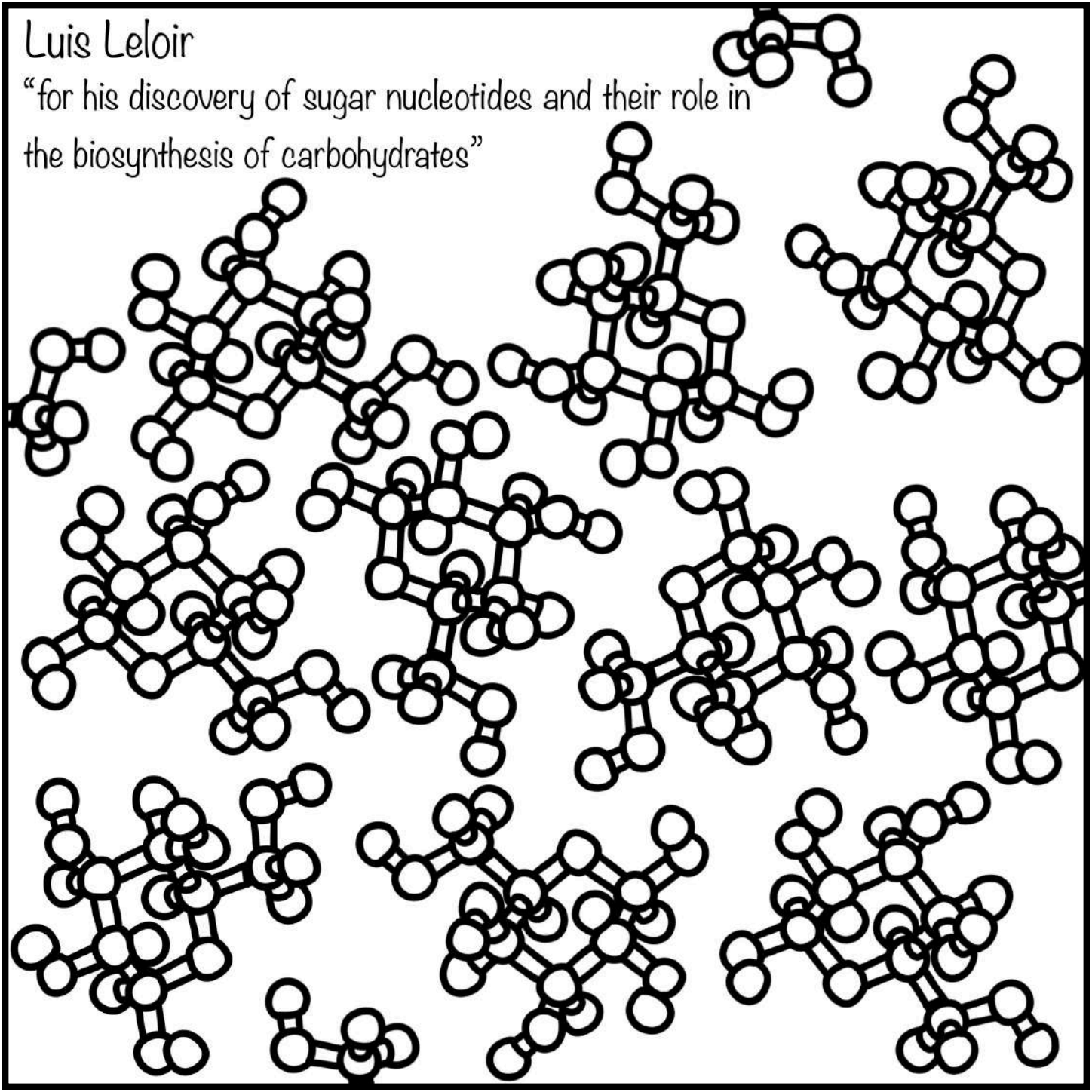
"for their contributions to the development of the concept of conformation and its application in chemistry"



1970 - Color the galactose:

Luis Leloir

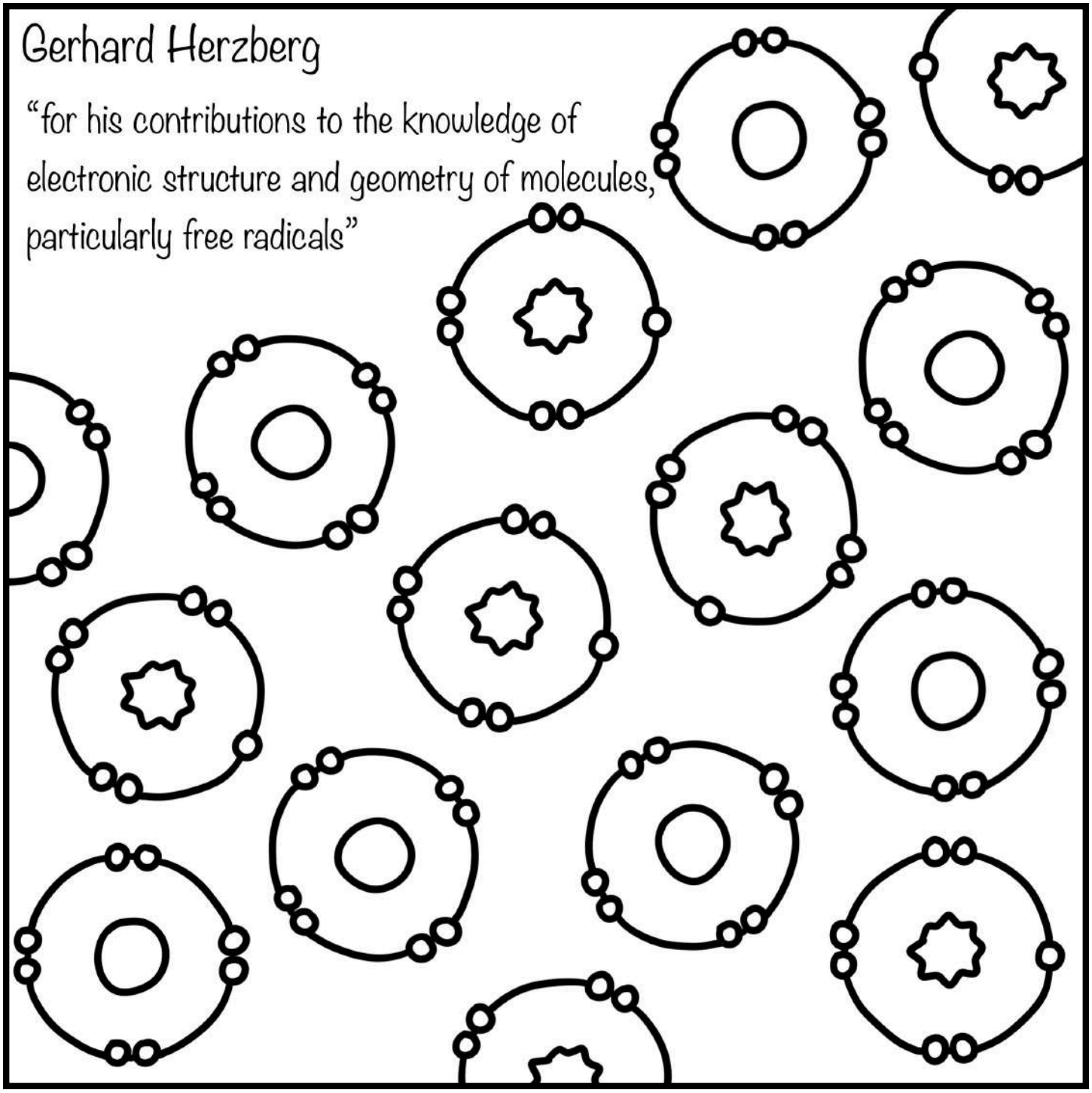
"for his discovery of sugar nucleotides and their role in the biosynthesis of carbohydrates"



1971 - Color the radicals:

Gerhard Herzberg

"for his contributions to the knowledge of electronic structure and geometry of molecules, particularly free radicals"



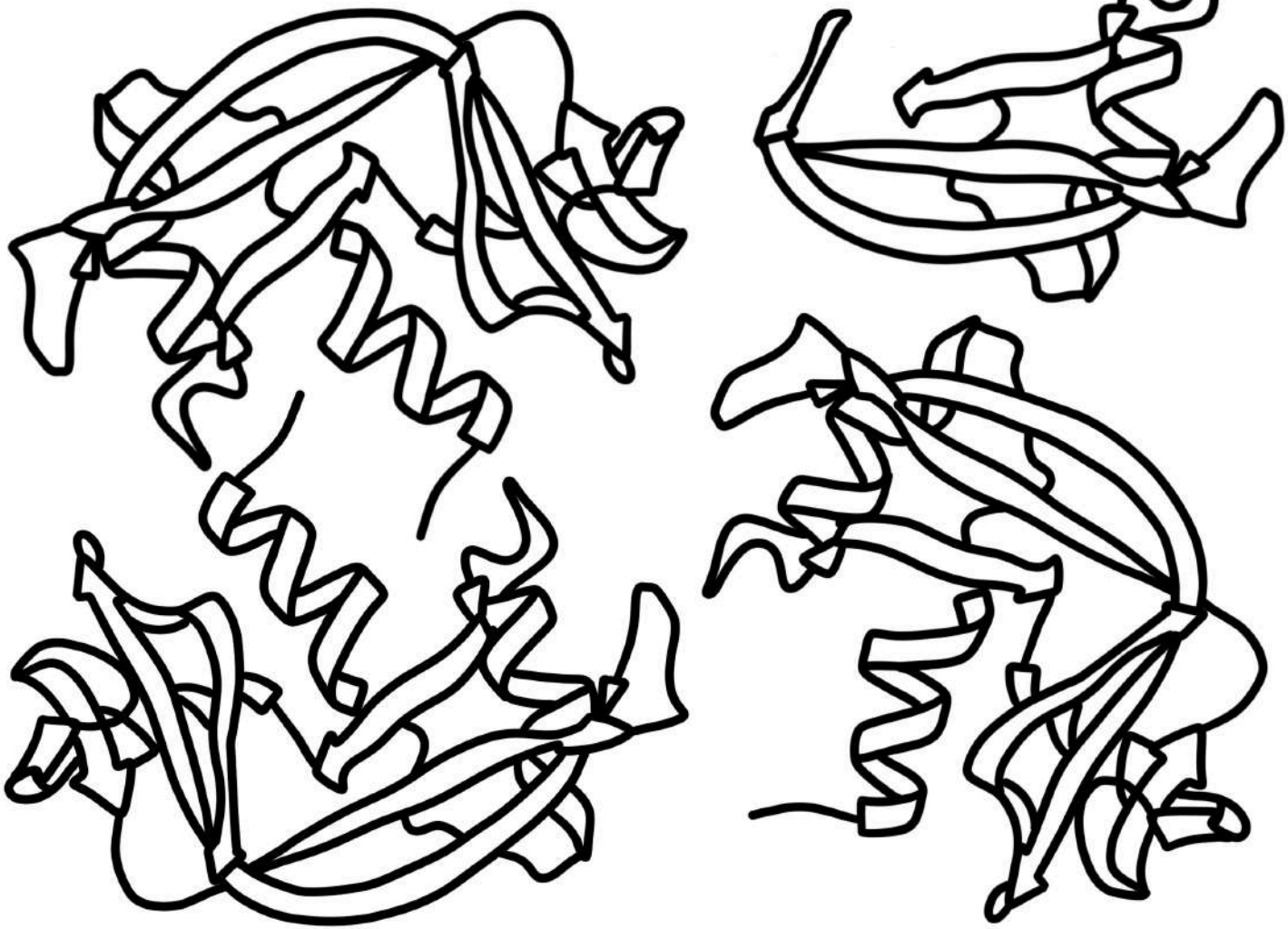
1972 - Color part of the ribonuclease:

Christian Anfinsen

"for his work on ribonuclease, especially concerning the connection between the amino acid sequence and the biologically active conformation"

Stanford Moore and William H. Stein

"for their contribution to the understanding of the connection between chemical structure and catalytic activity of the active centre of the ribonuclease molecule"



1973 - Color the ferrocene:

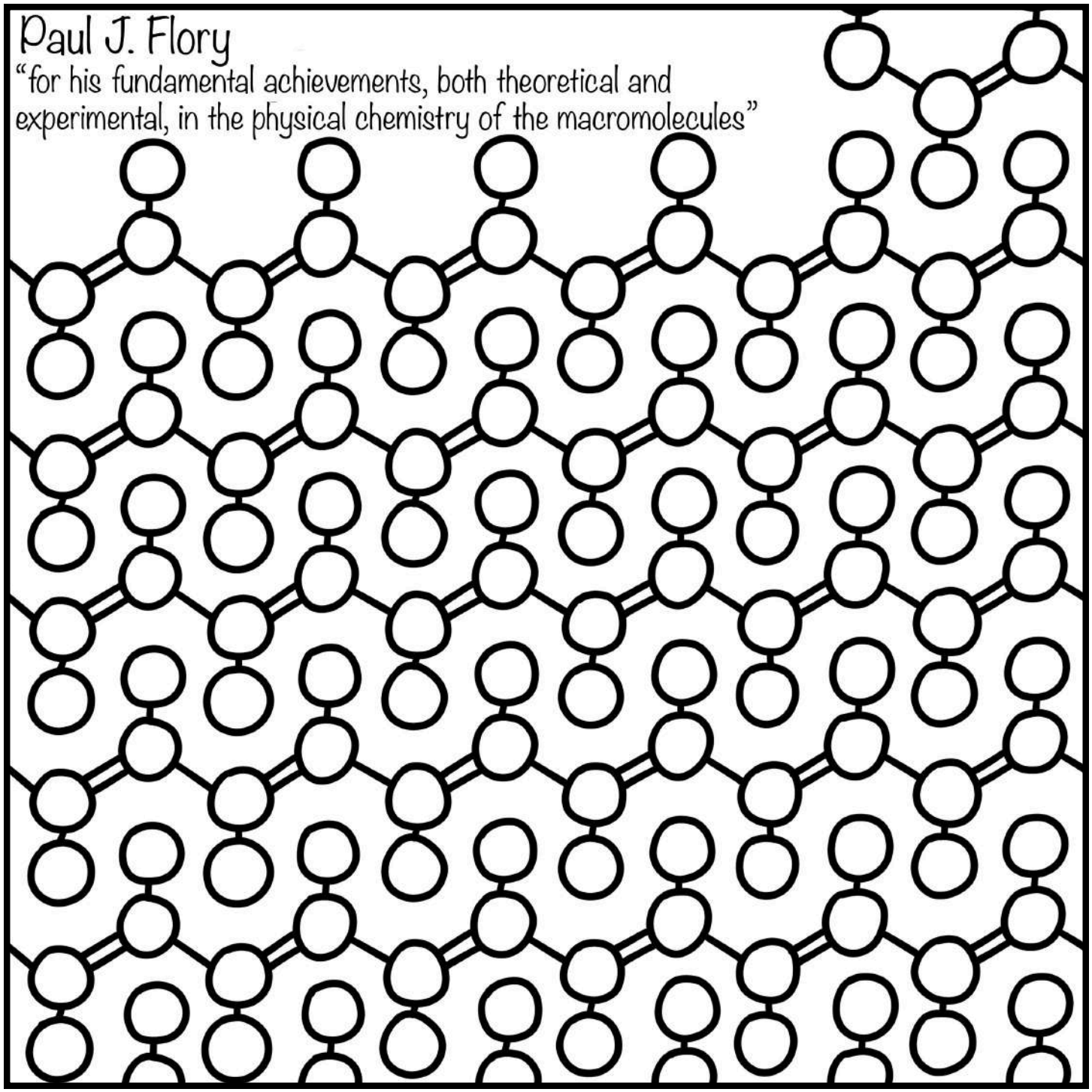
Ernst Otto Fischer - Geoffrey Wilkinson

"for their pioneering work, performed independently, on the chemistry of the organometallic, so called sandwich compounds"

1974 - Color the polyacetylene:

Paul J. Flory

"for his fundamental achievements, both theoretical and experimental, in the physical chemistry of the macromolecules"



1975 - Color the D- and L-Alanine:

.= oxygen

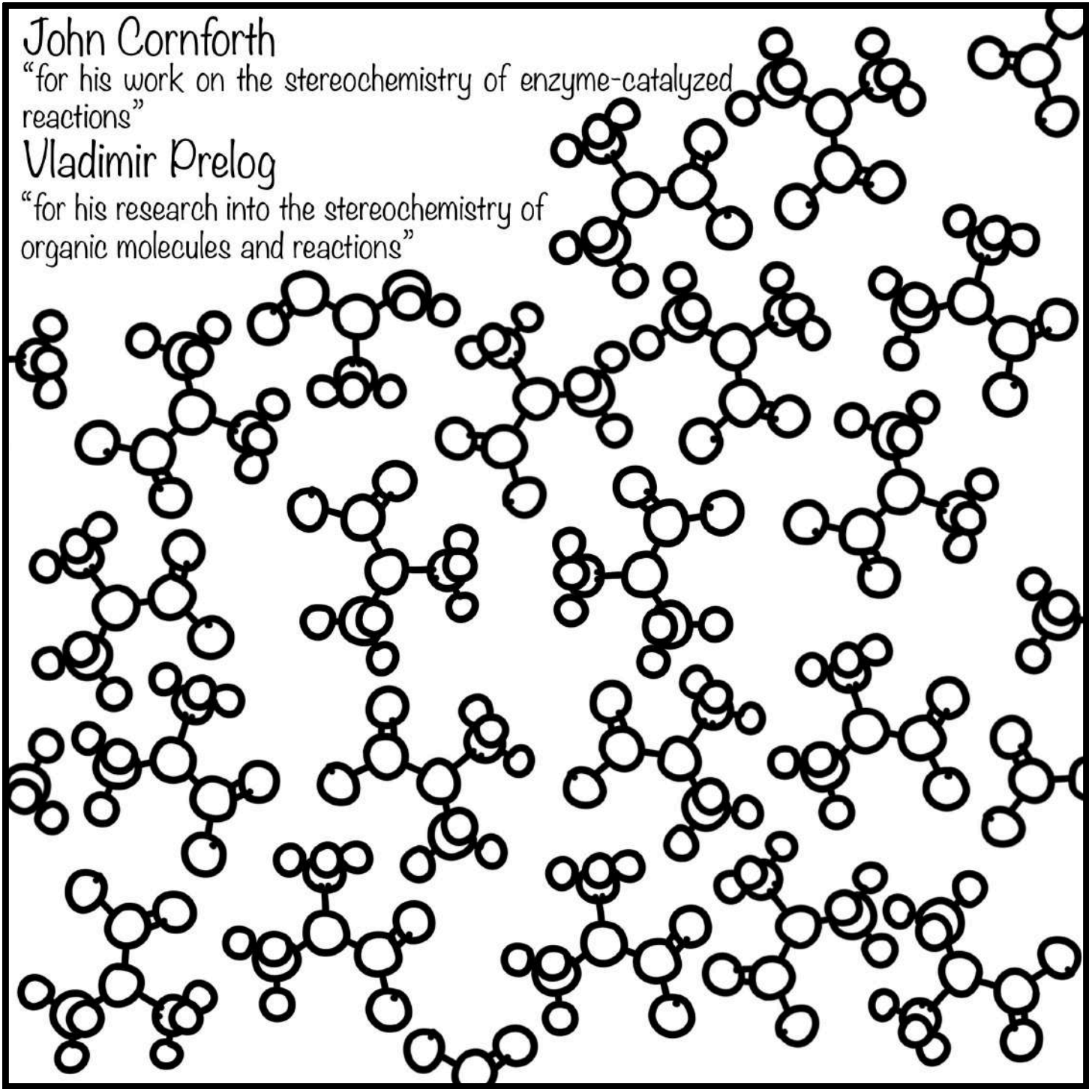
.. = nitrogen

John Cornforth

"for his work on the stereochemistry of enzyme-catalyzed reactions"

Vladimir Prelog

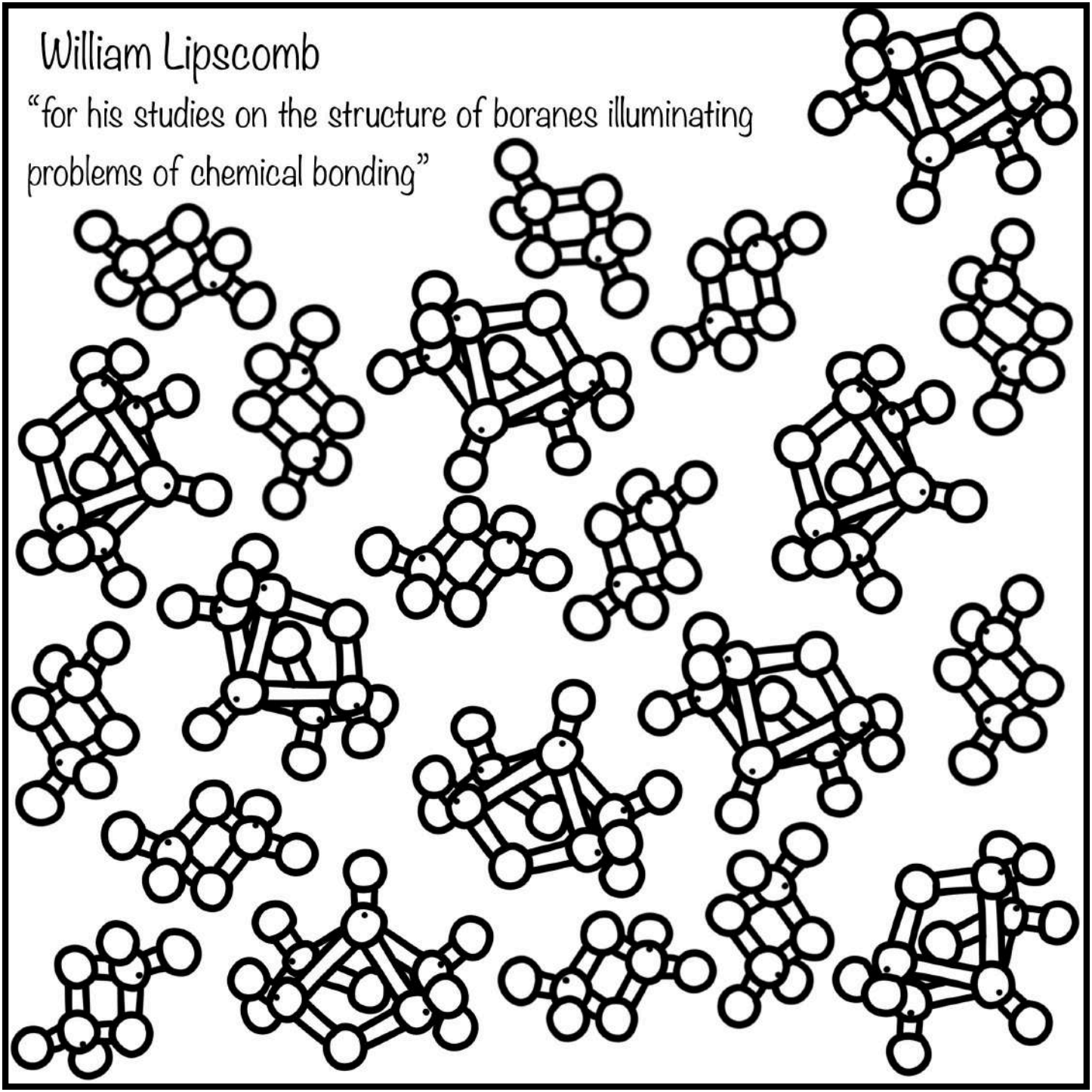
"for his research into the stereochemistry of organic molecules and reactions"



1976 - Color the boranes:
. = boron

William Lipscomb

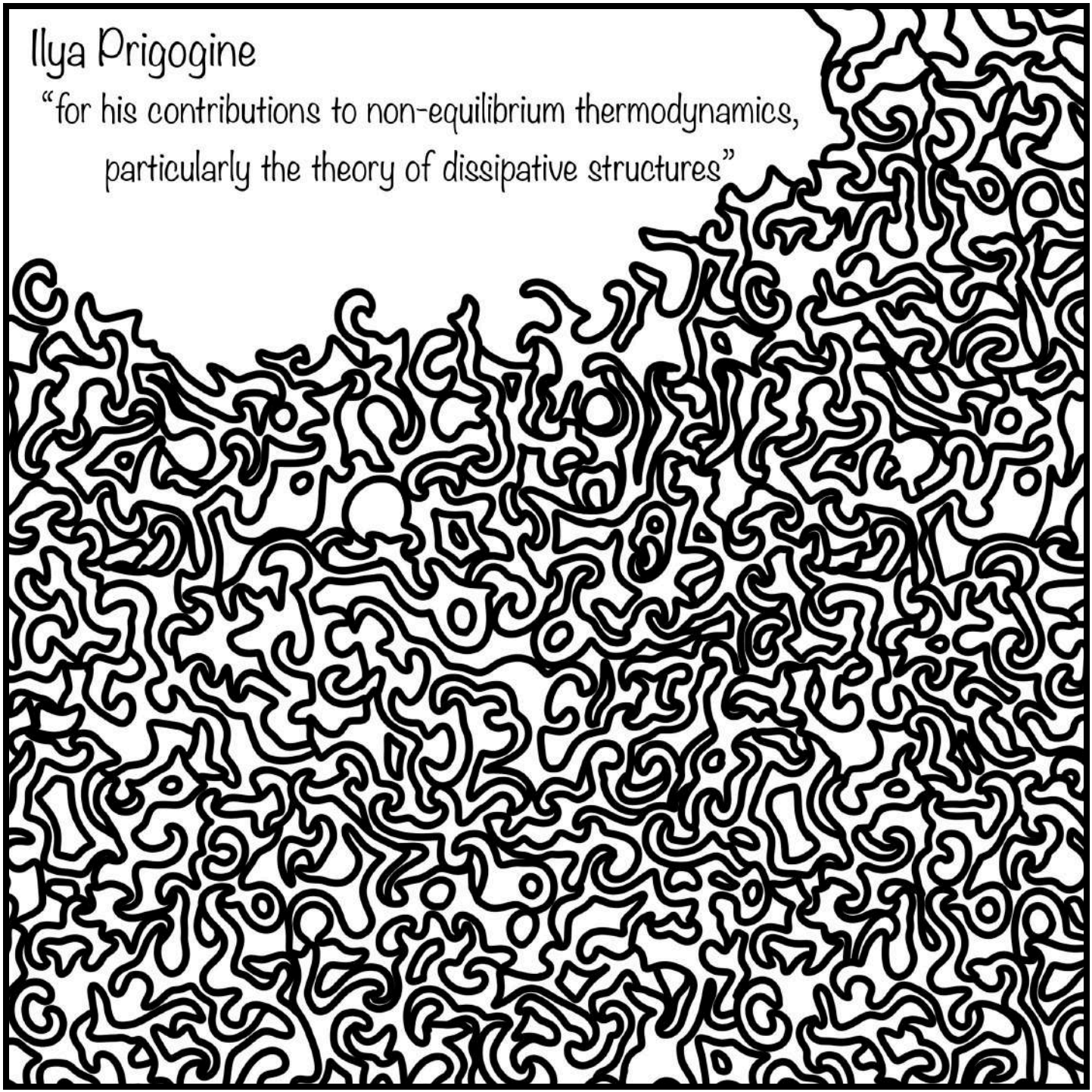
"for his studies on the structure of boranes illuminating problems of chemical bonding"



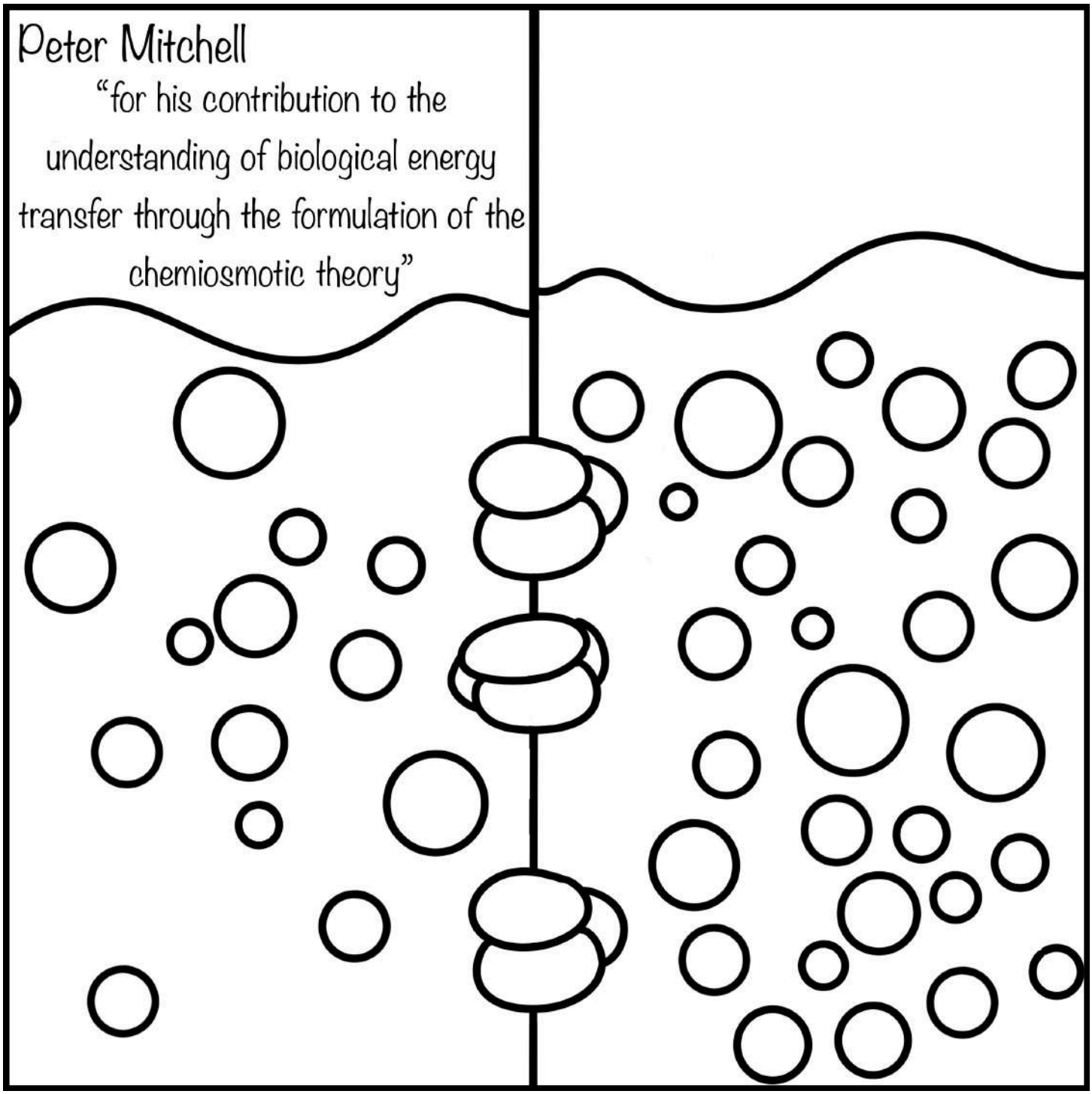
1977 - Color the dissipative reaction:

Ilya Prigogine

"for his contributions to non-equilibrium thermodynamics,
particularly the theory of dissipative structures"



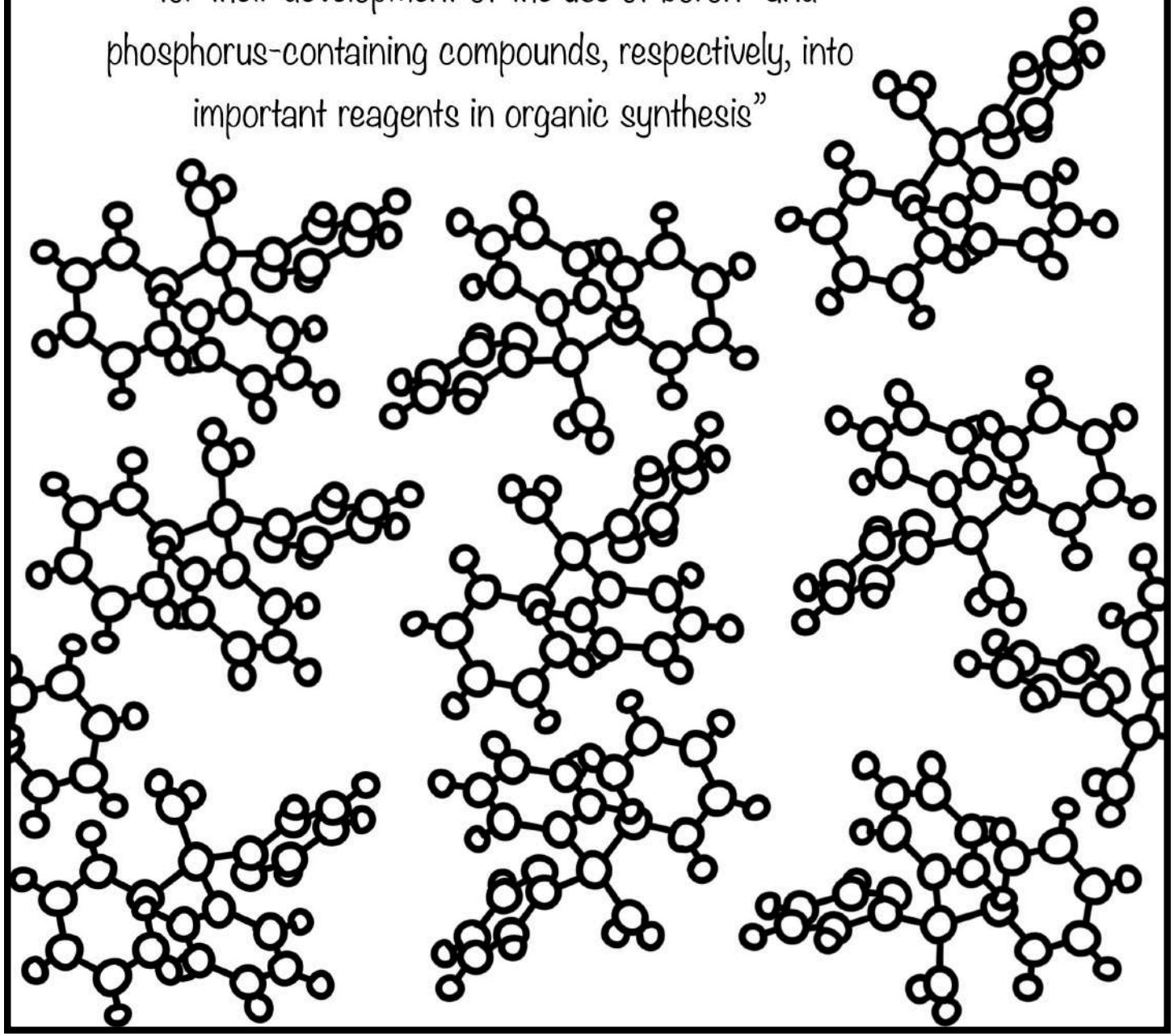
1978 - Color the ion channels:


Peter Mitchell
"for his contribution to the understanding of biological energy transfer through the formulation of the chemiosmotic theory"

1979 - Color the Wittig reagent:

Herbert C. Brown and Georg Wittig

"for their development of the use of boron- and phosphorus-containing compounds, respectively, into important reagents in organic synthesis"



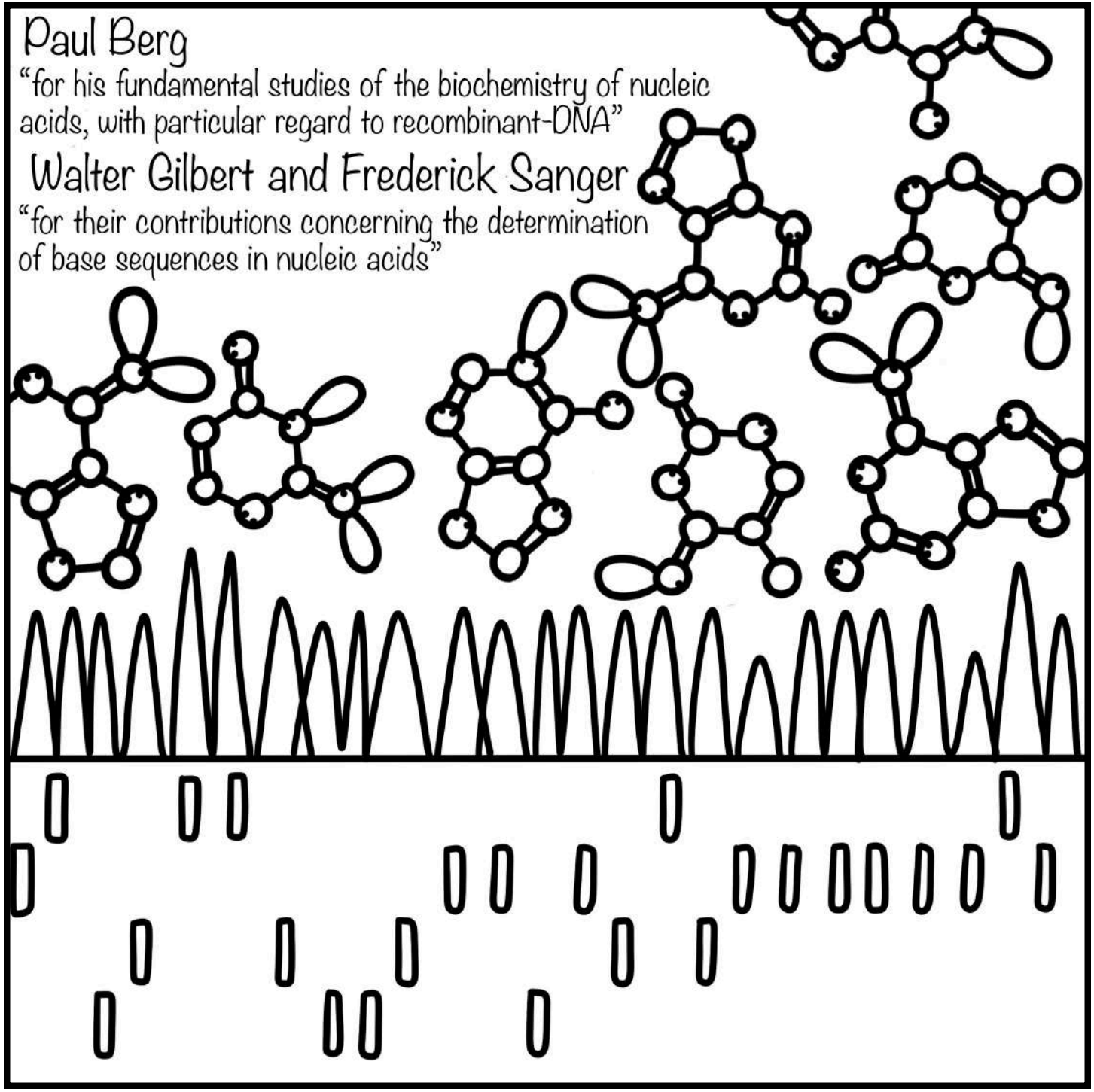
1980 - Color the Sanger DNA sequencing:
. = oxygen
.. = nitrogen

Paul Berg

"for his fundamental studies of the biochemistry of nucleic acids, with particular regard to recombinant-DNA"

Walter Gilbert and Frederick Sanger

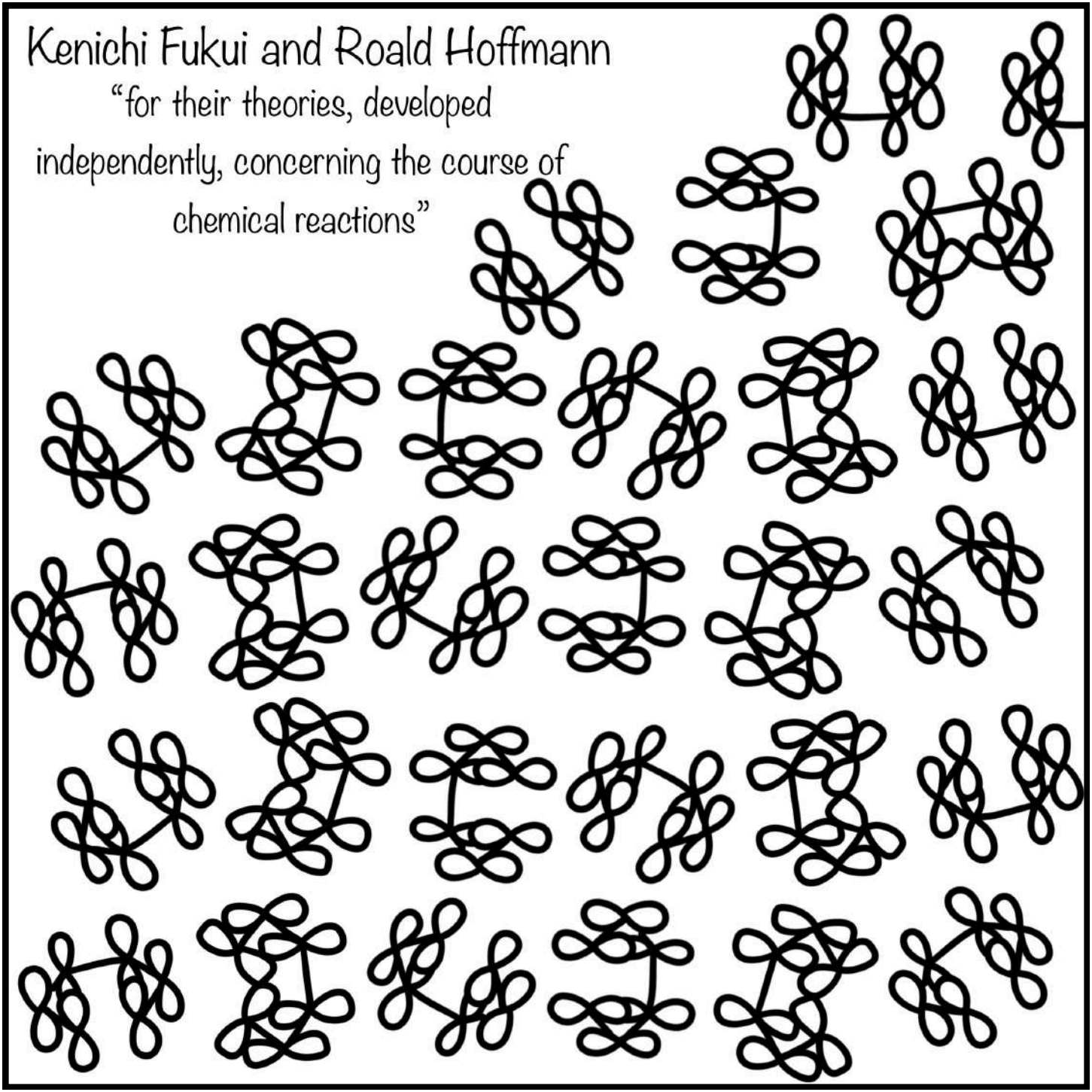
"for their contributions concerning the determination of base sequences in nucleic acids"



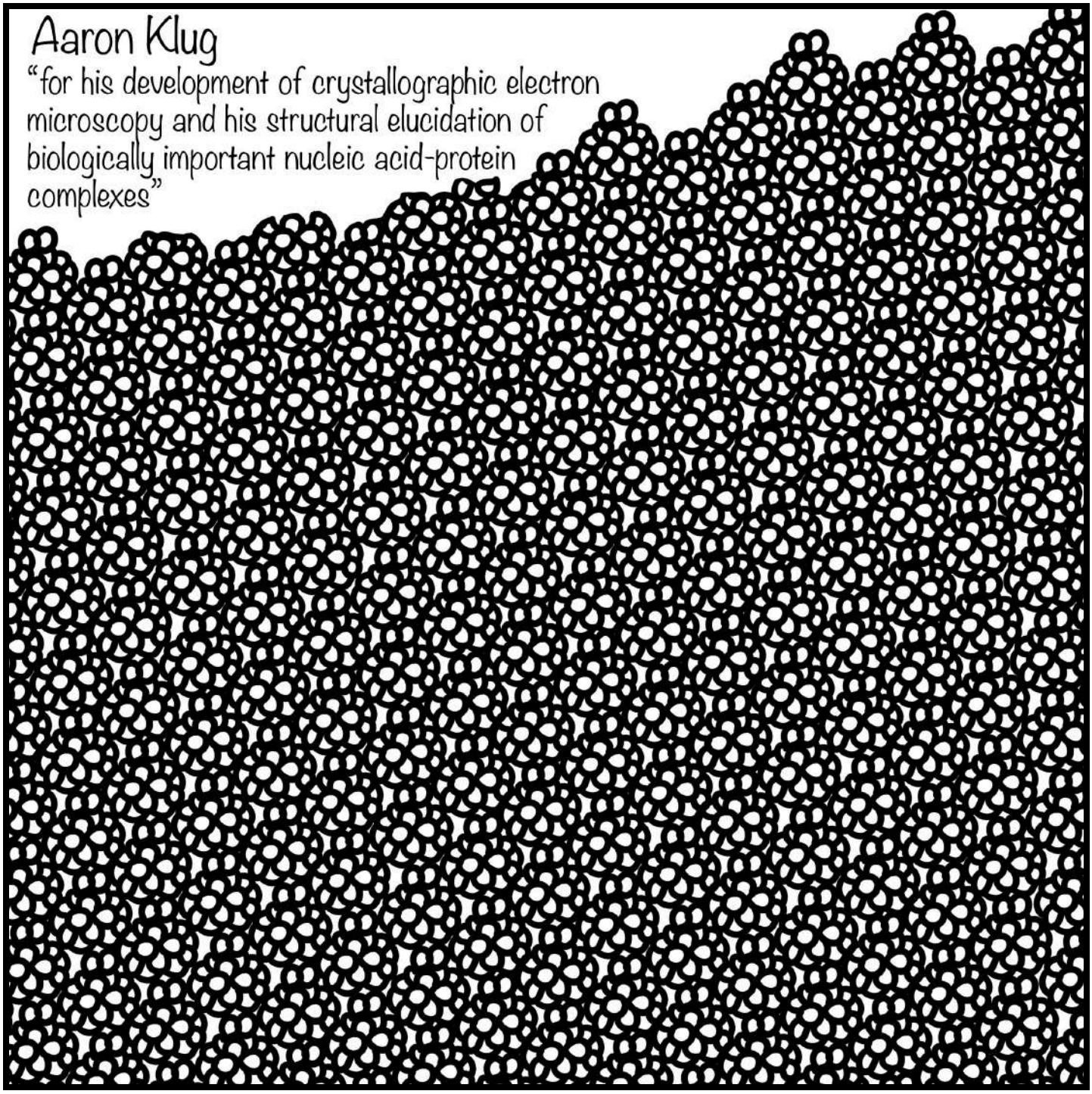
1981 - Color the orbitals:

Kenichi Fukui and Roald Hoffmann

"for their theories, developed independently, concerning the course of chemical reactions"



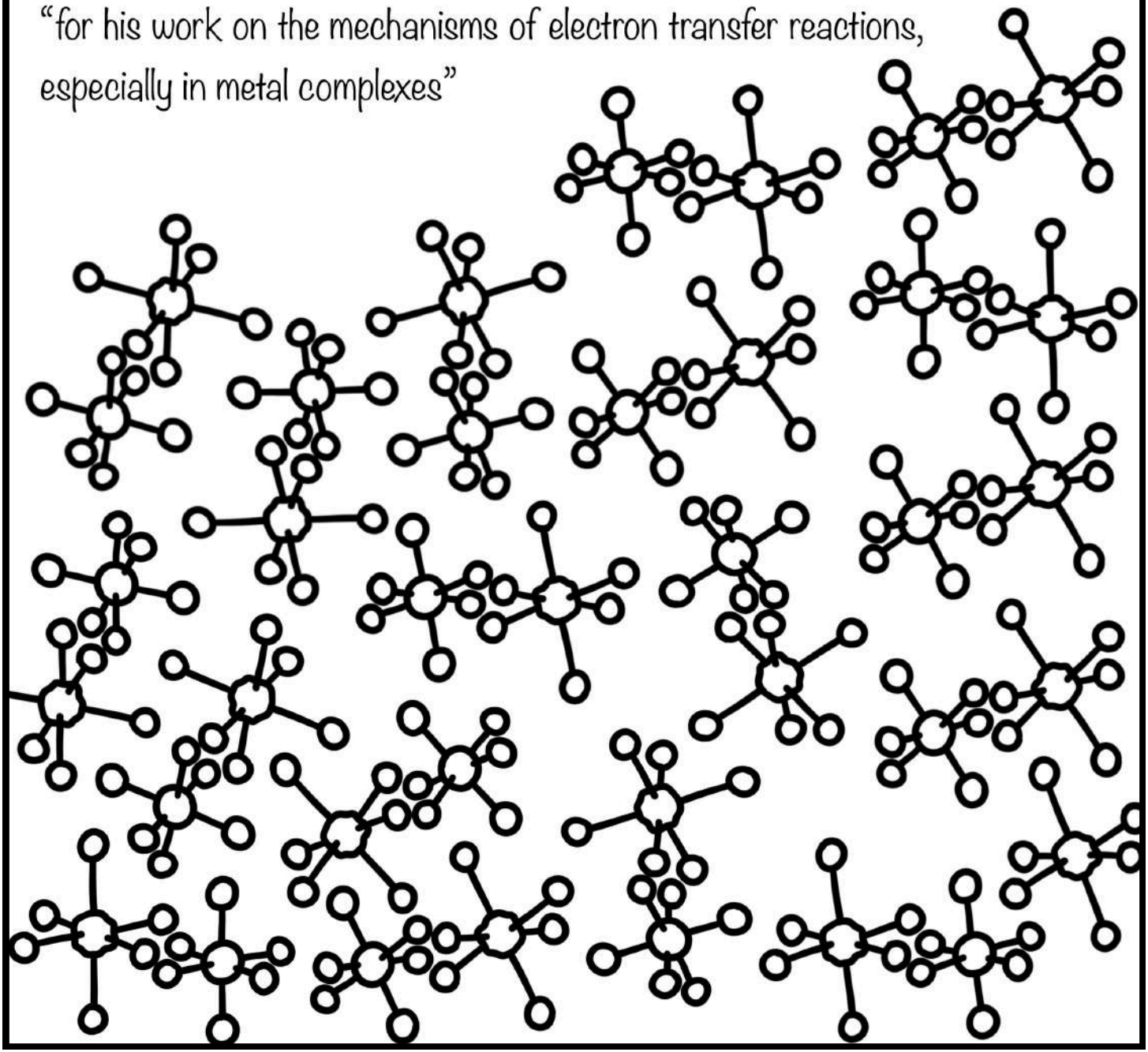
1982 - Color the crystal:


Aaron Klug
"for his development of crystallographic electron microscopy and his structural elucidation of biologically important nucleic acid-protein complexes"

1983 - Color the electron transfer:

Henry Taube

"for his work on the mechanisms of electron transfer reactions, especially in metal complexes"



1984 - Color the solid phase synthesis:

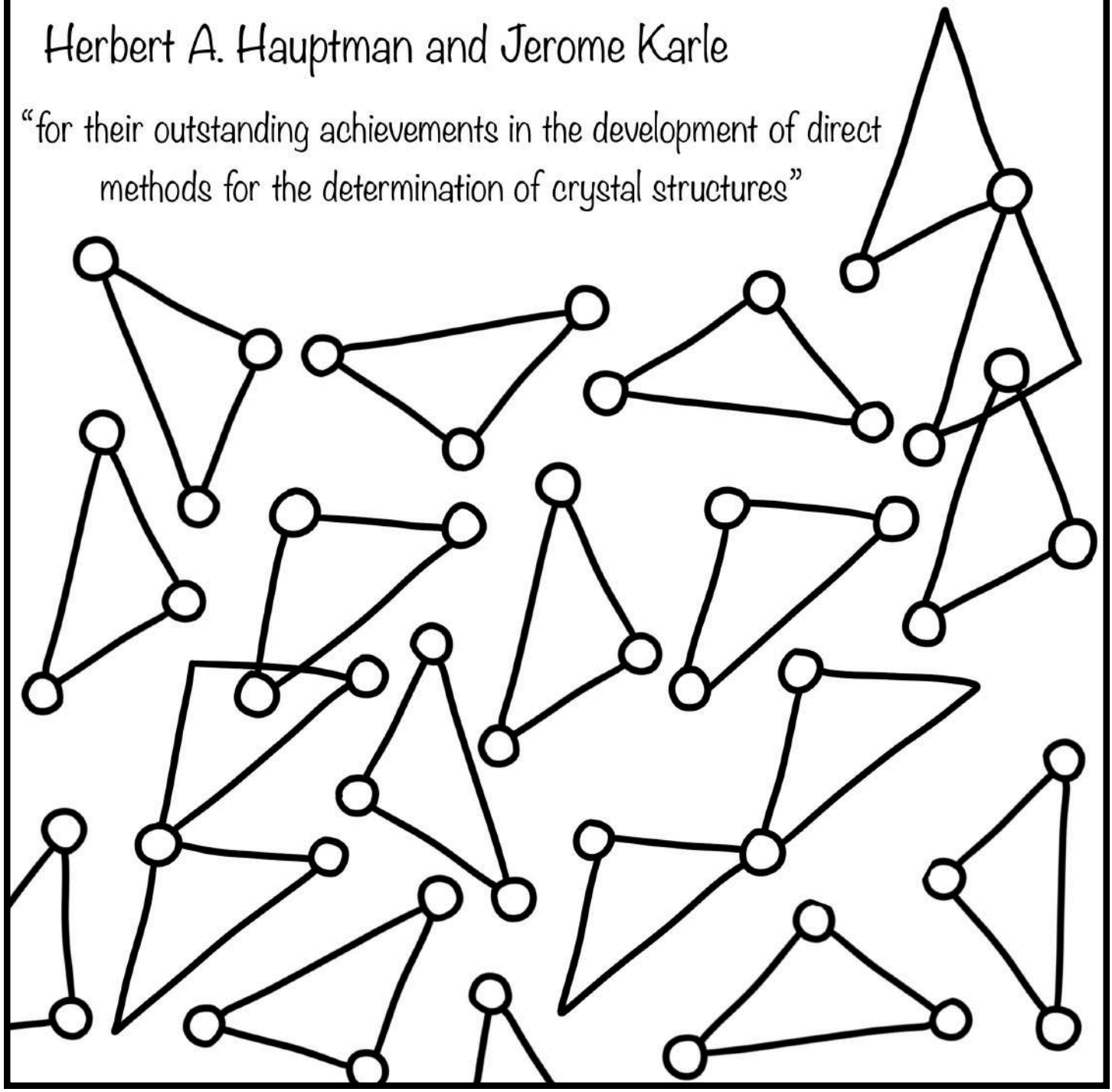
Bruce Merrifield

"for his development of methodology for chemical synthesis on a solid matrix"

1985 - Color the direct method for crystals structure solving:

Herbert A. Hauptman and Jerome Karle

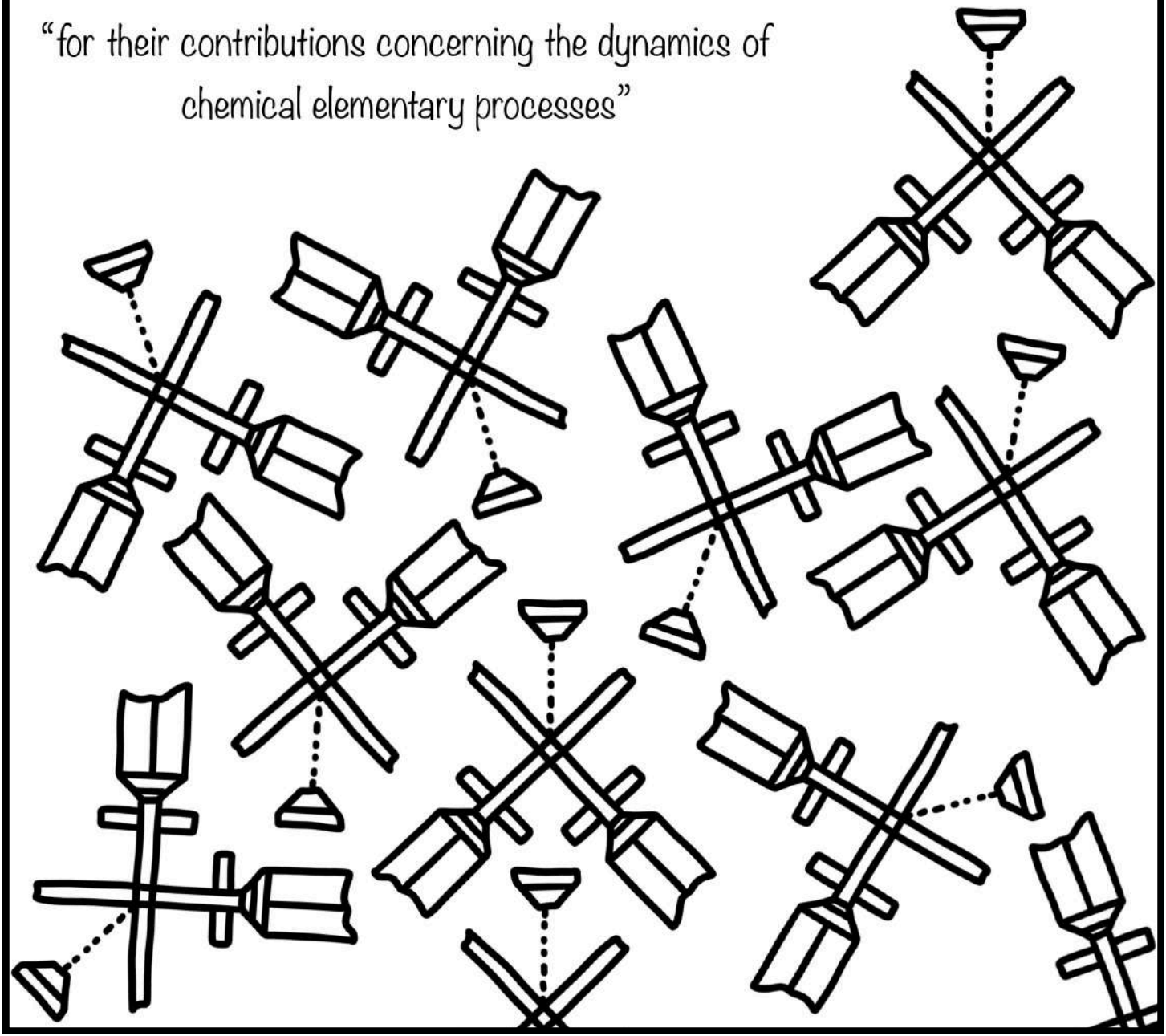
"for their outstanding achievements in the development of direct methods for the determination of crystal structures"



1986 - Color the beams:

Dudley R. Herschbach, Yuan T. Lee and John C. Polanyi

"for their contributions concerning the dynamics of chemical elementary processes"



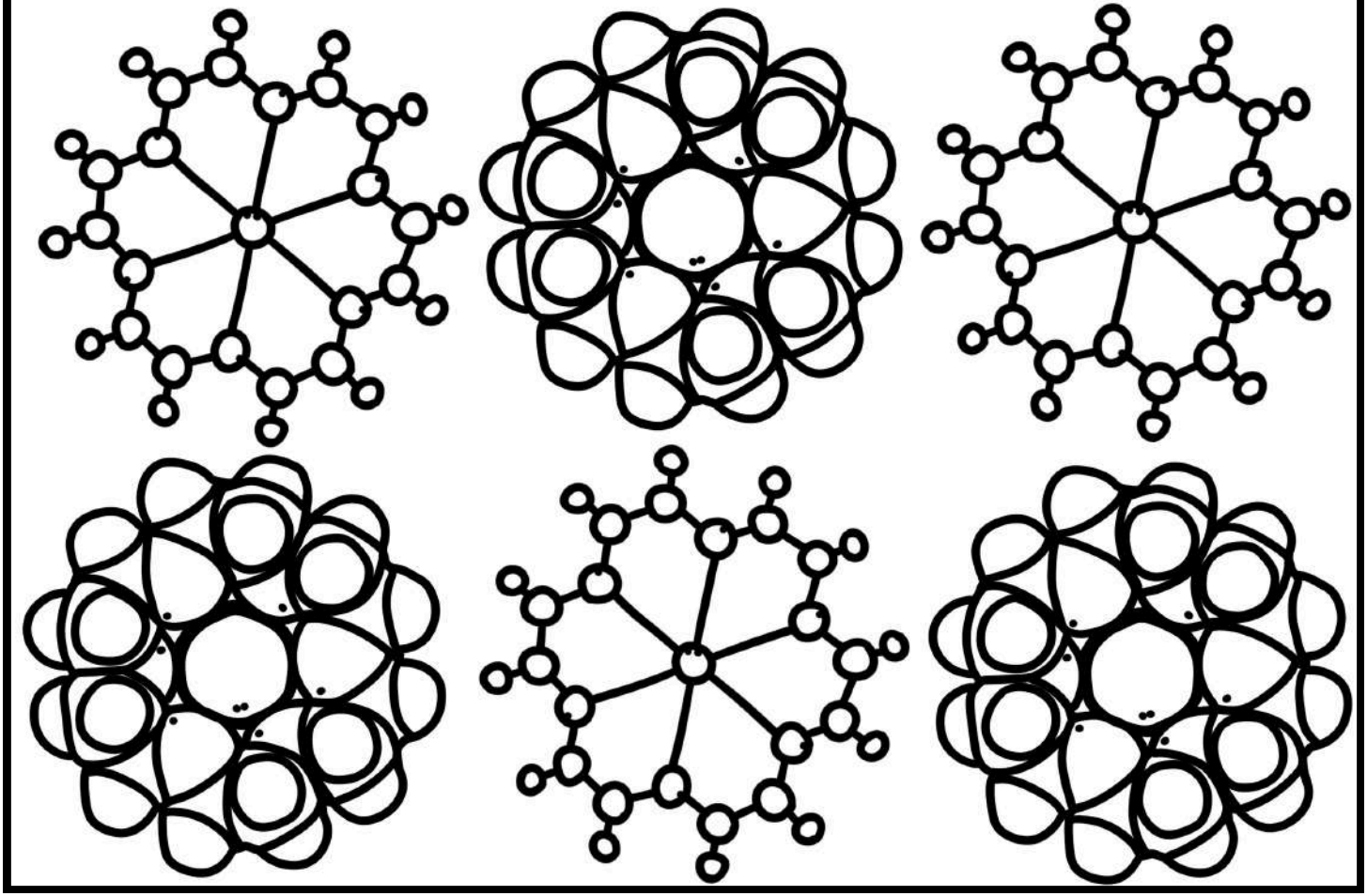
1987 - Color the 18-crown-6:

.= oxygen

.. = potassium

Donald J. Cram, Jean-Marie Lehn and Charles J. Pedersen

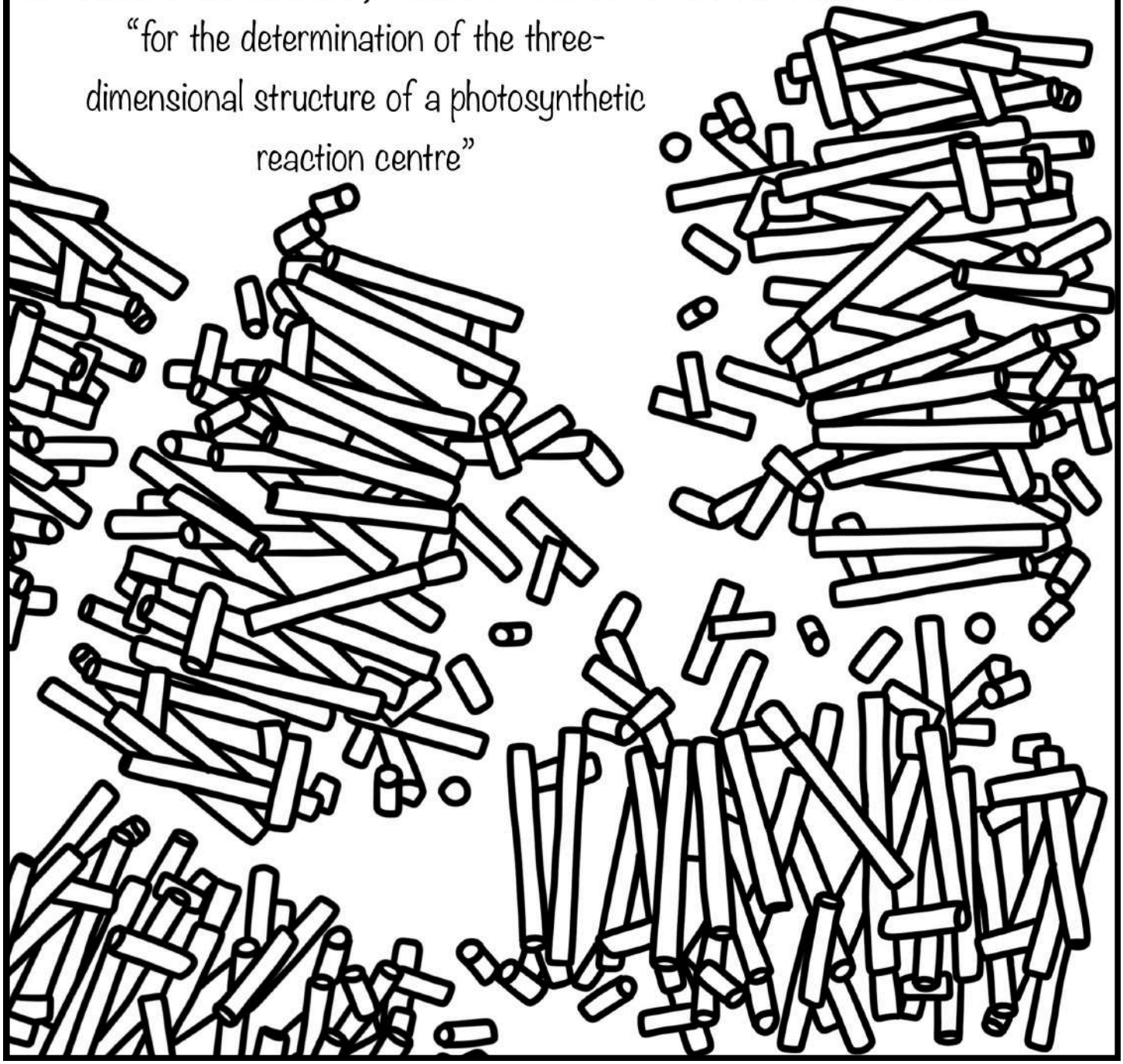
"for their development and use of molecules with structure-specific interactions of high selectivity"



1988 - Color part of the photosynthetic reaction centre:

Johann Deisenhofer, Robert Huber and Hartmut Michel

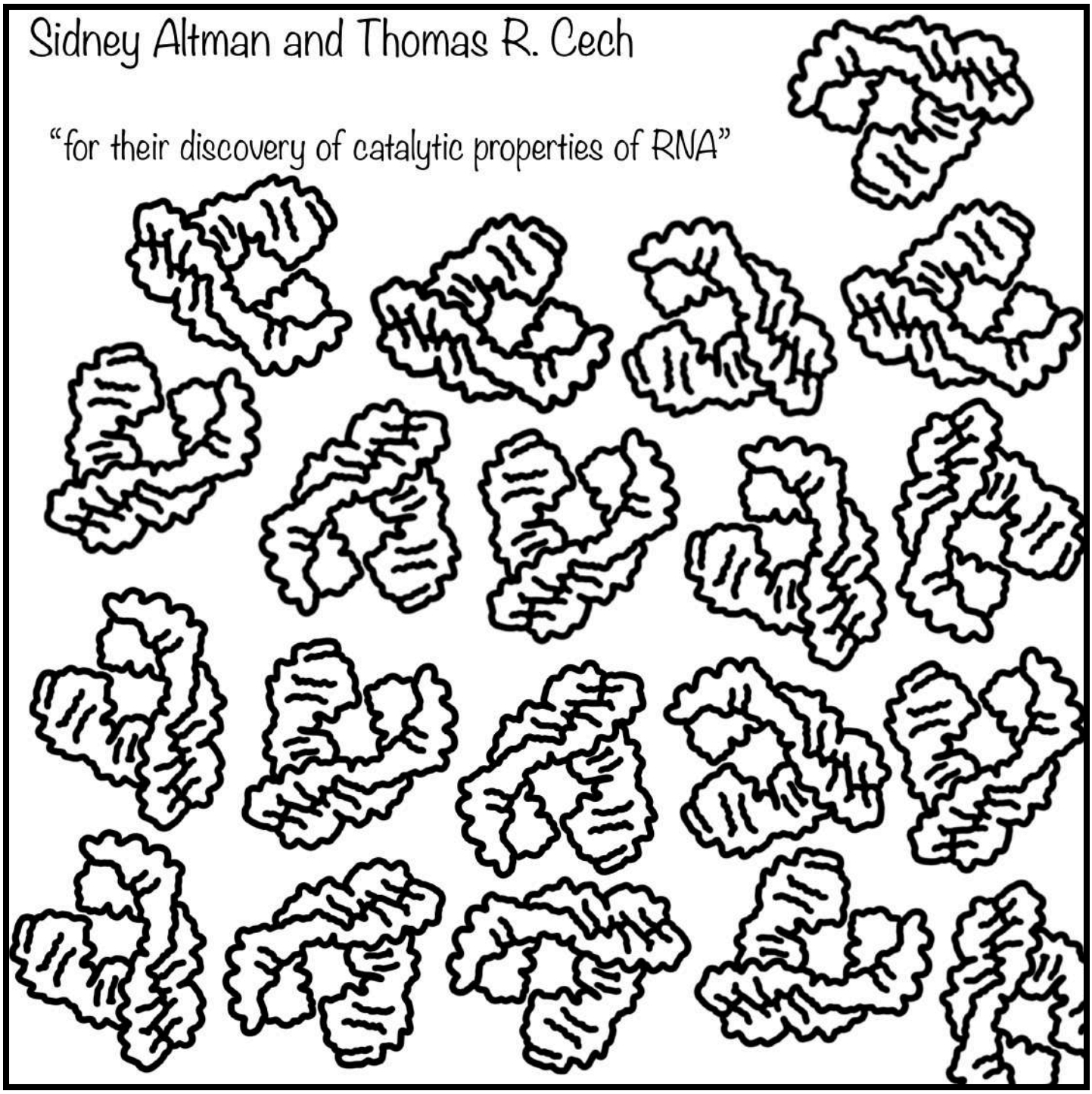
"for the determination of the three-dimensional structure of a photosynthetic reaction centre"



1989 - Color the ribozyme:

Sidney Altman and Thomas R. Cech

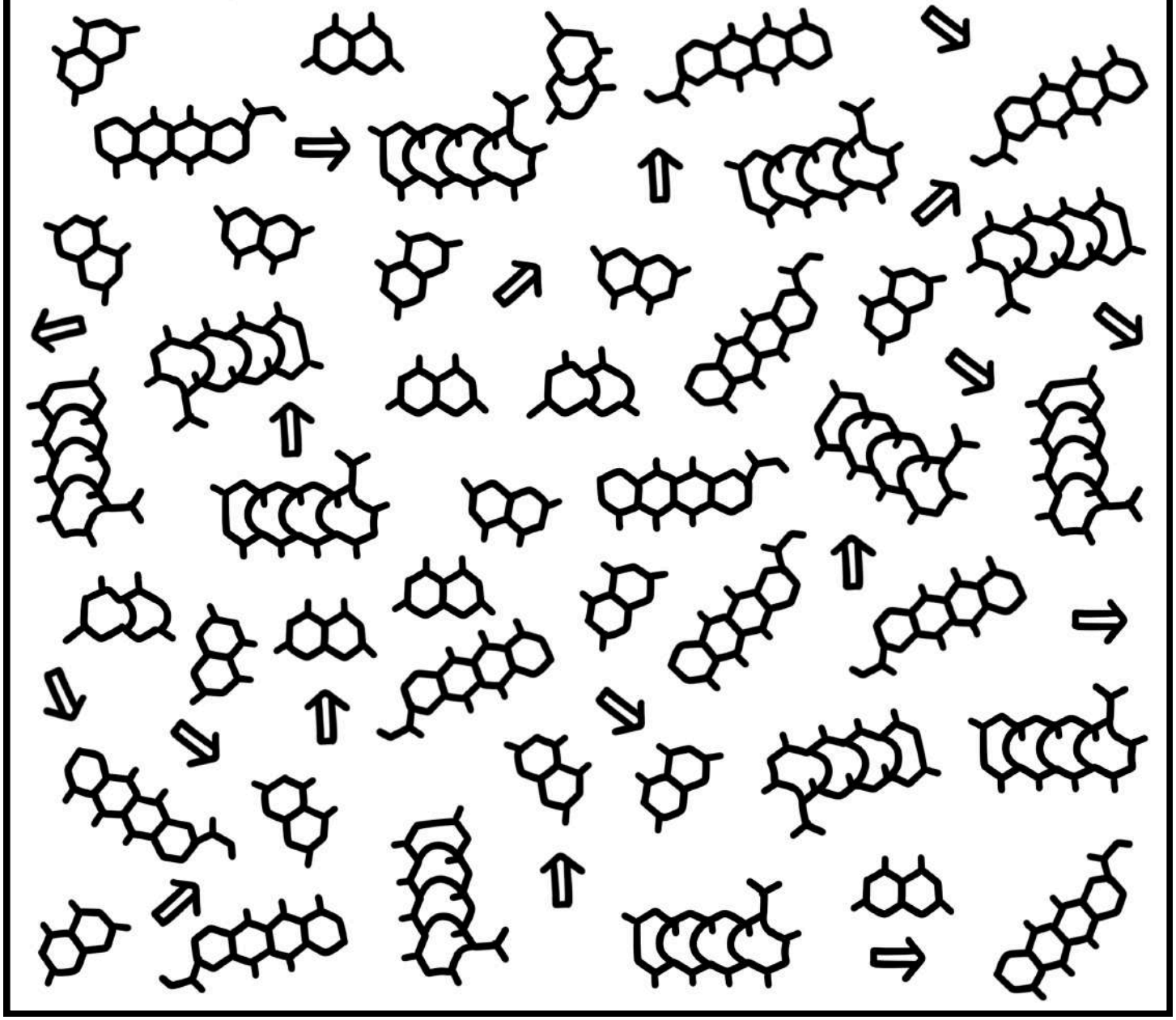
"for their discovery of catalytic properties of RNA"



1990 - Color the retrosynthesis:

Elias James Corey

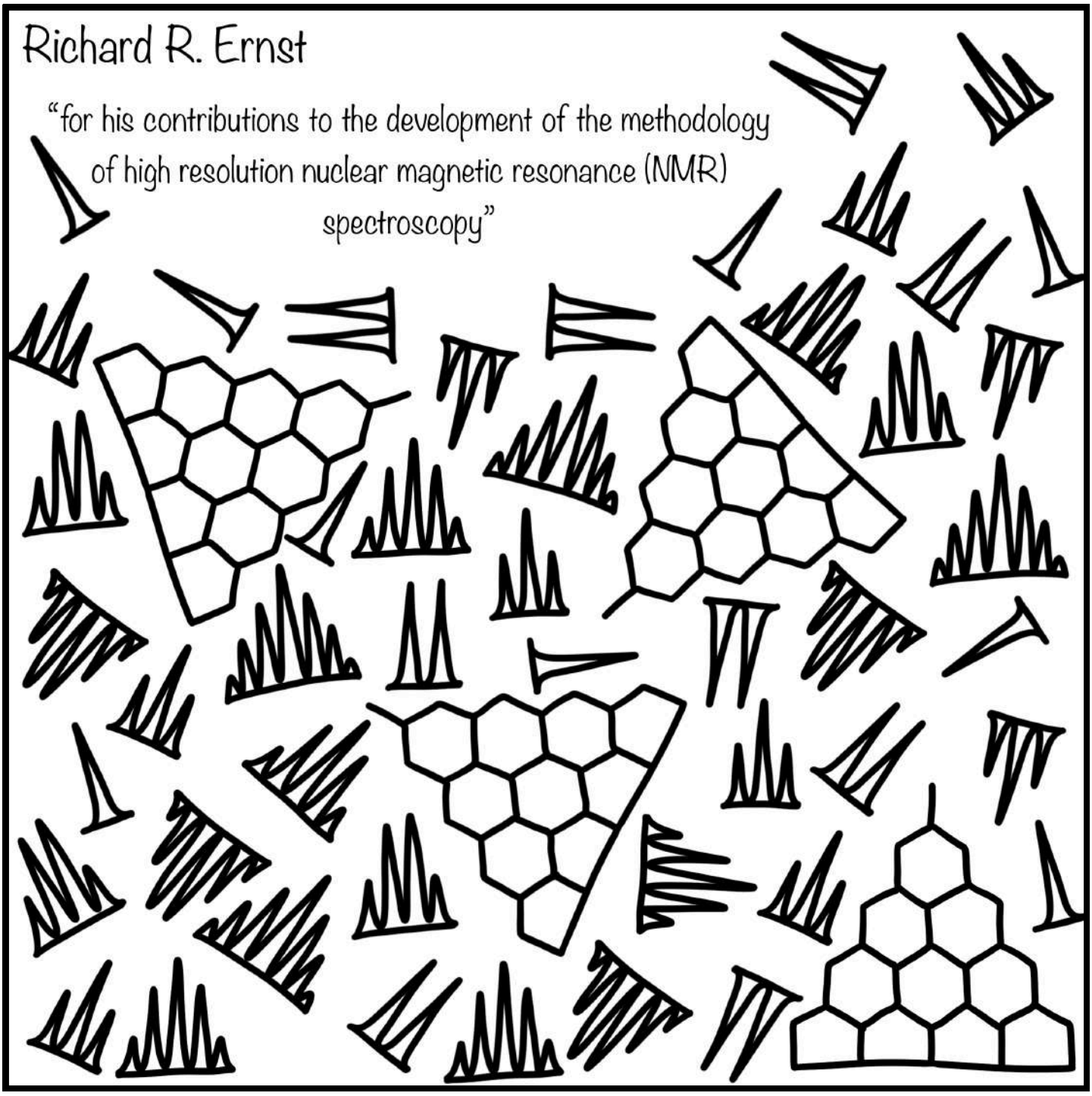
"for his development of the theory and methodology of organic synthesis"



1991 - Color the peaks:

Richard R. Ernst

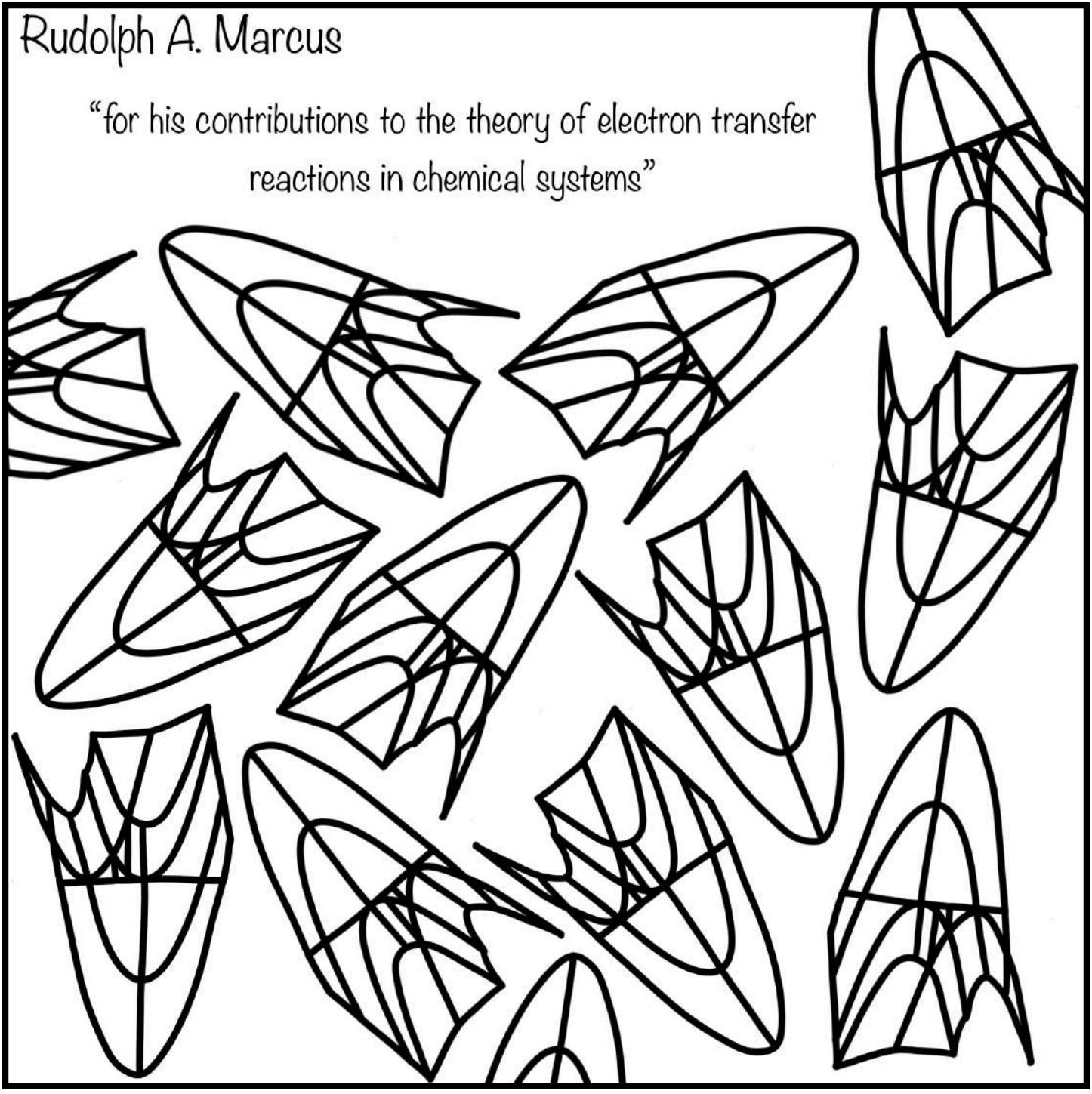
"for his contributions to the development of the methodology of high resolution nuclear magnetic resonance (NMR) spectroscopy"



1992- Color the electron transfer graph:

Rudolph A. Marcus

"for his contributions to the theory of electron transfer reactions in chemical systems"



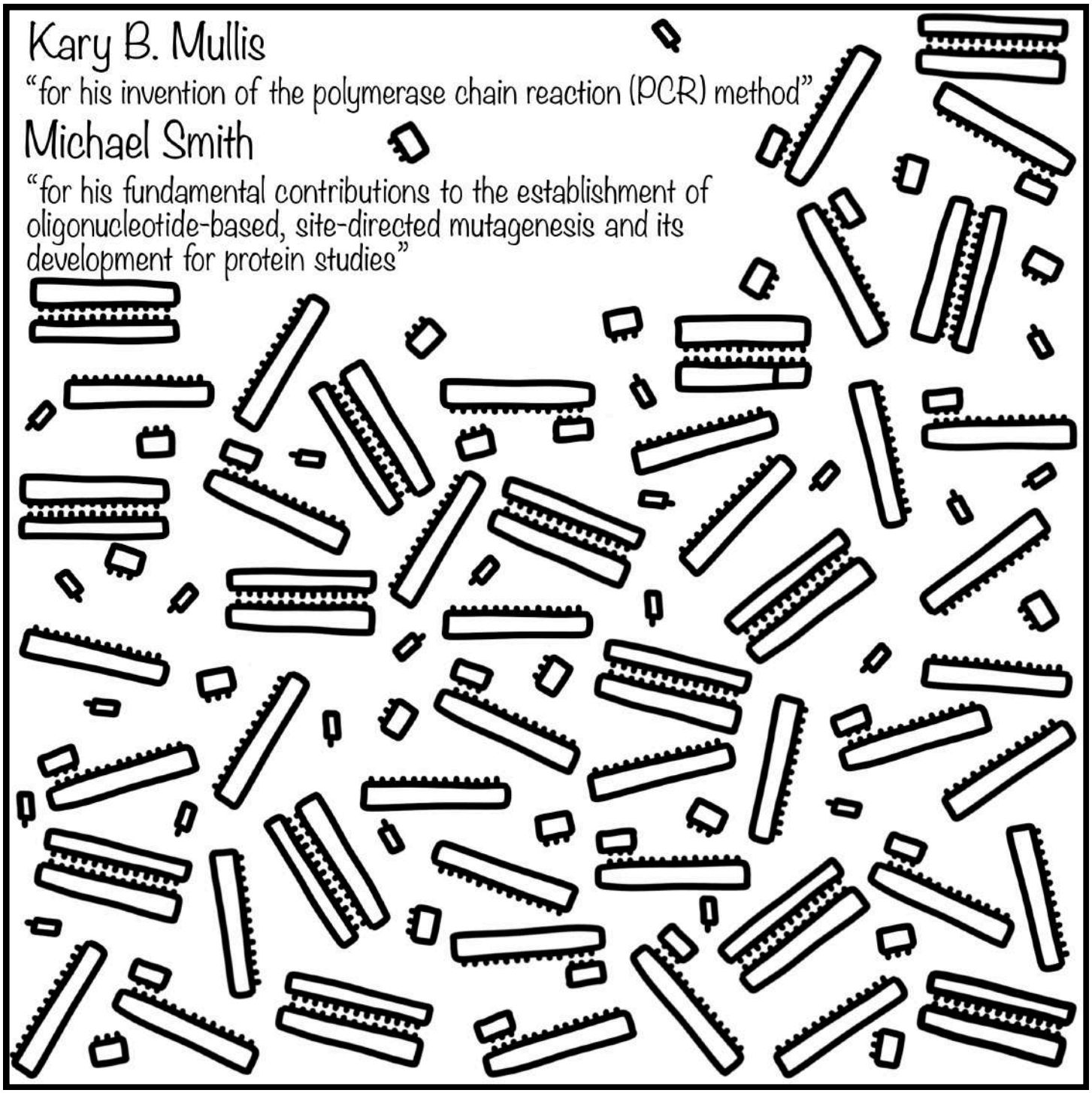
1993- Color the DNA:

Kary B. Mullis

"for his invention of the polymerase chain reaction (PCR) method"

Michael Smith

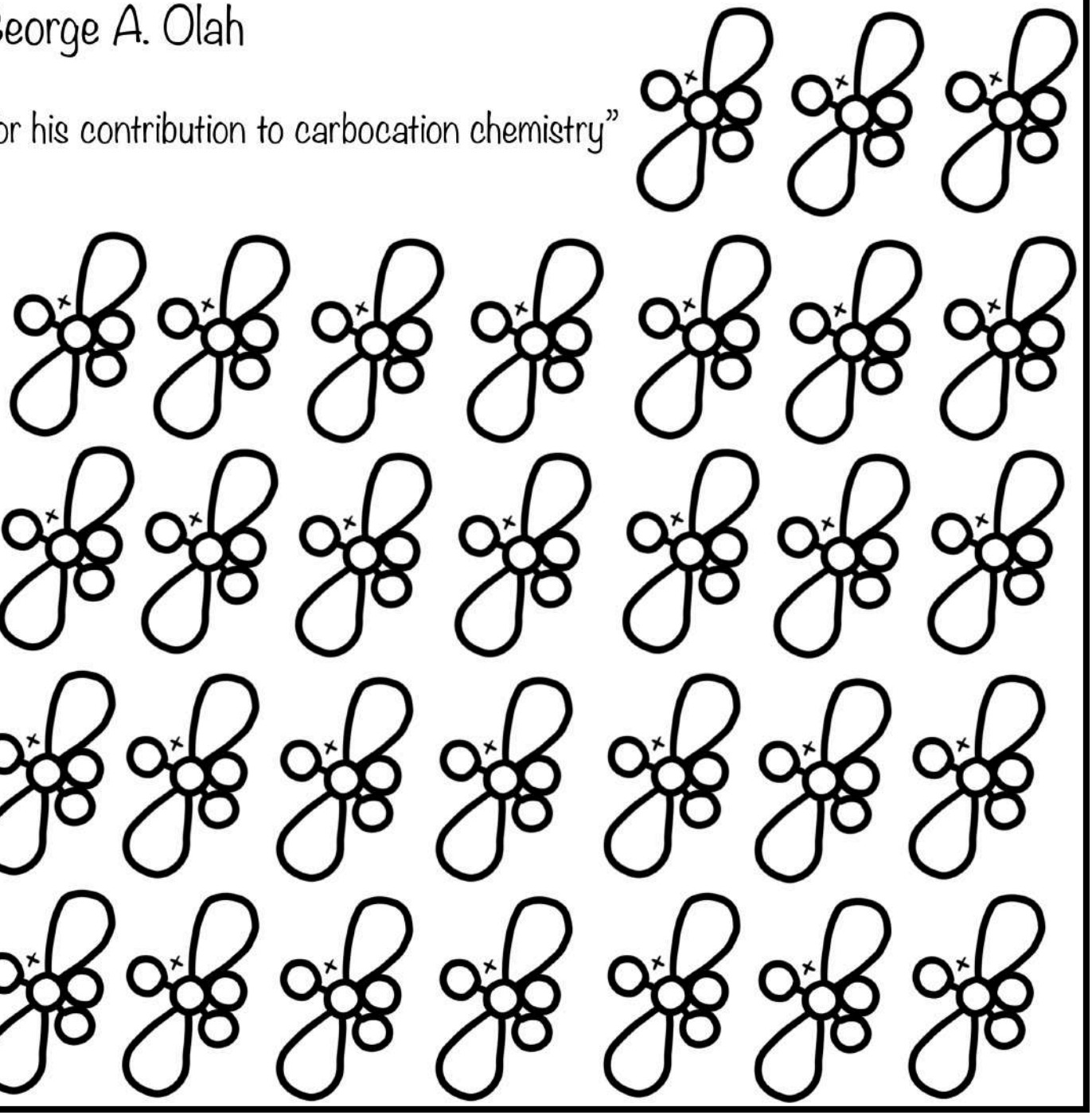
"for his fundamental contributions to the establishment of oligonucleotide-based, site-directed mutagenesis and its development for protein studies"



1994- Color the carbocation:

George A. Olah

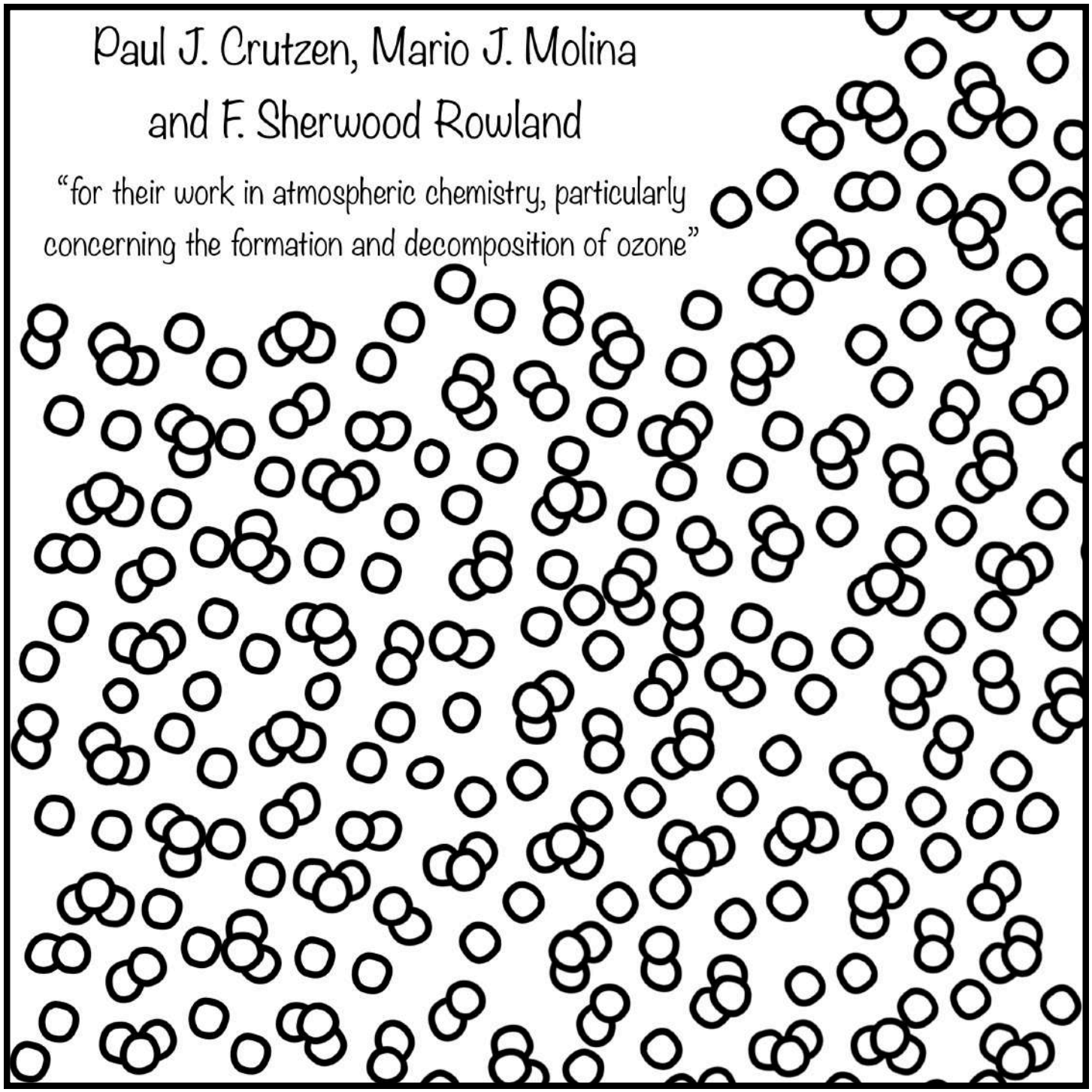
"for his contribution to carbocation chemistry"



1995- Color the ozone decomposition:

Paul J. Crutzen, Mario J. Molina
and F. Sherwood Rowland

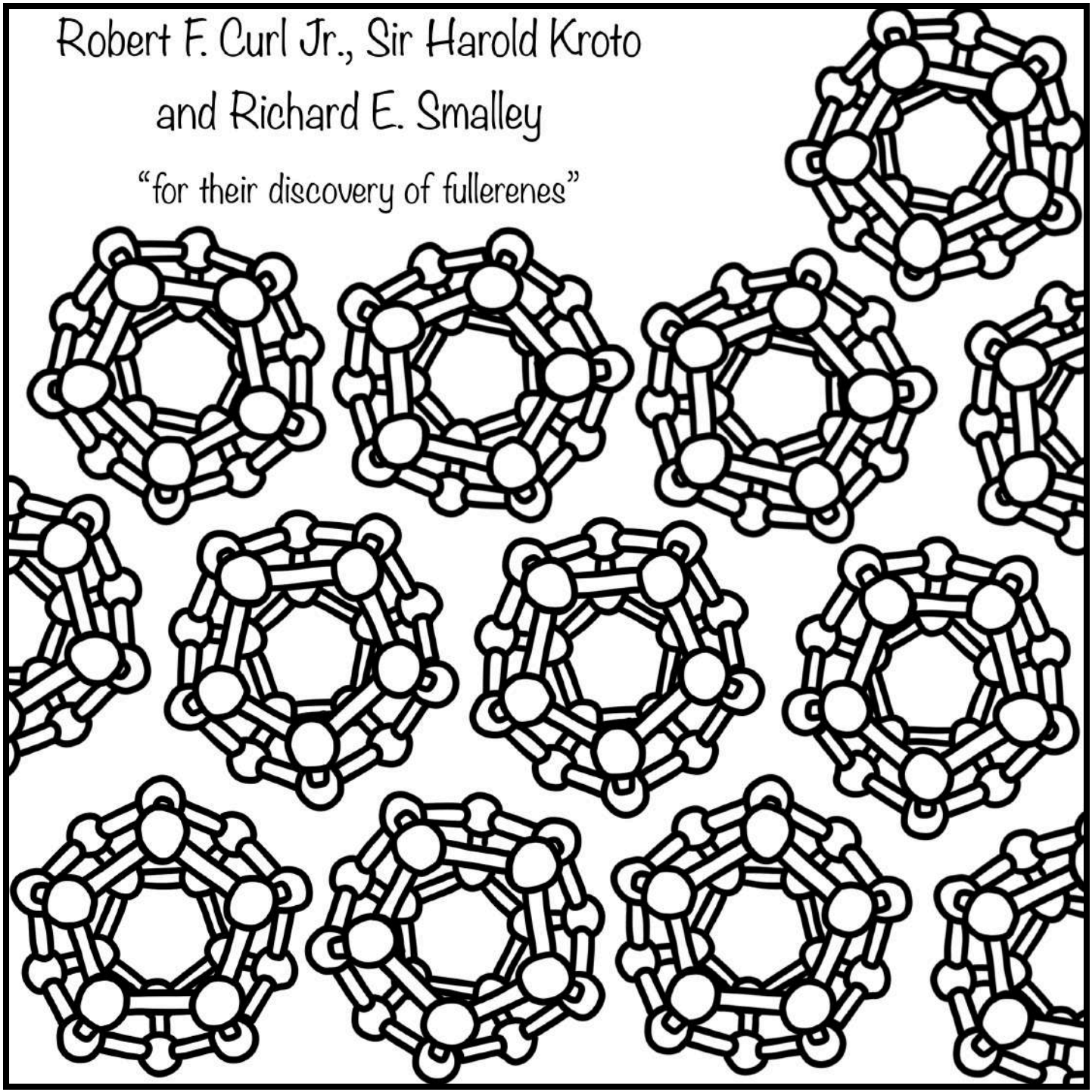
"for their work in atmospheric chemistry, particularly concerning the formation and decomposition of ozone"



1996 - Color the fullerenes:

Robert F. Curl Jr., Sir Harold Kroto and Richard E. Smalley

"for their discovery of fullerenes"



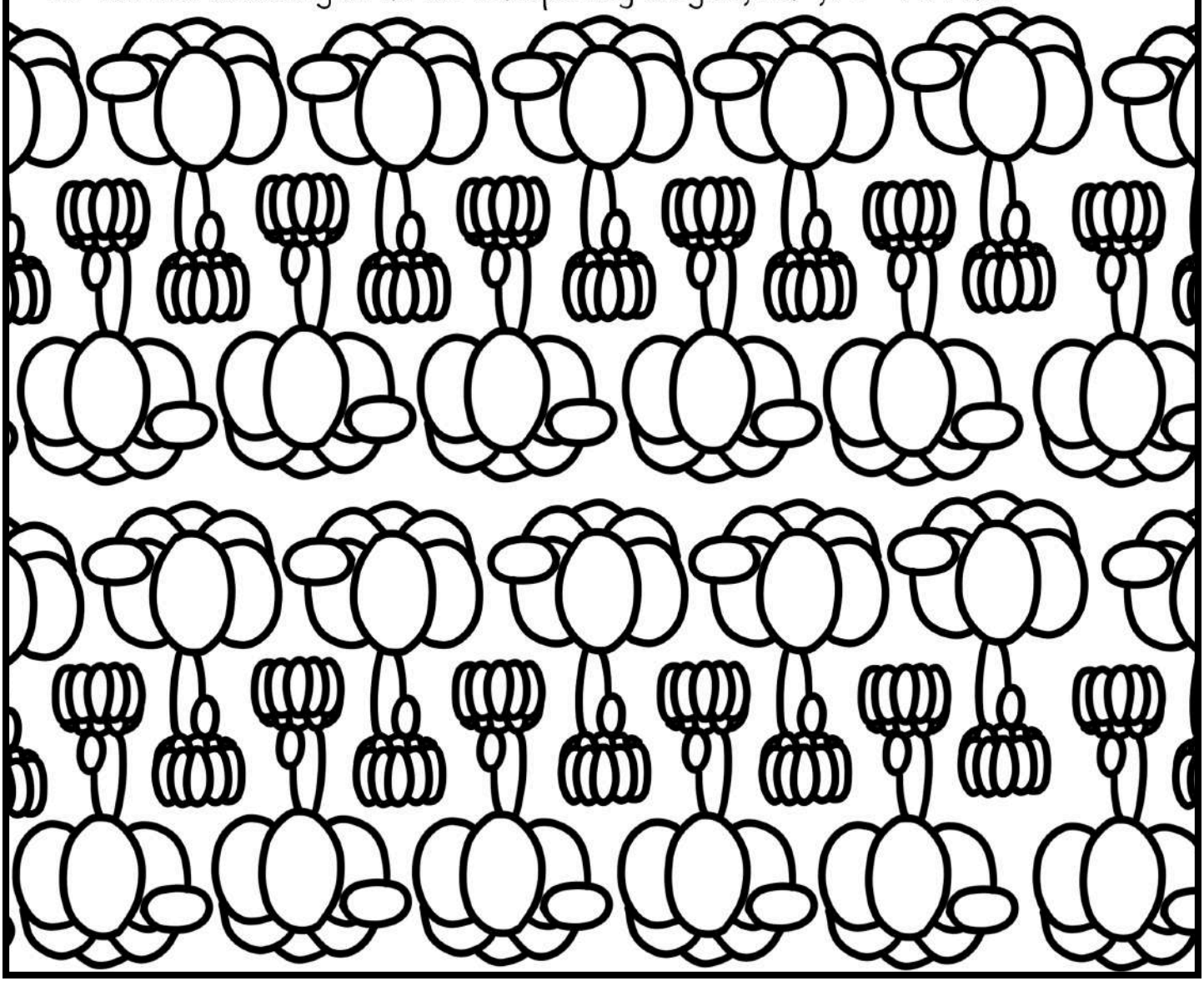
1997 - Color the ATPase:

Paul D. Boyer and John E. Walker

"for their elucidation of the enzymatic mechanism underlying the synthesis of adenosine triphosphate (ATP)"

Jens C. Skou

"for the first discovery of an ion-transporting enzyme, Na+, K+ -ATPase"



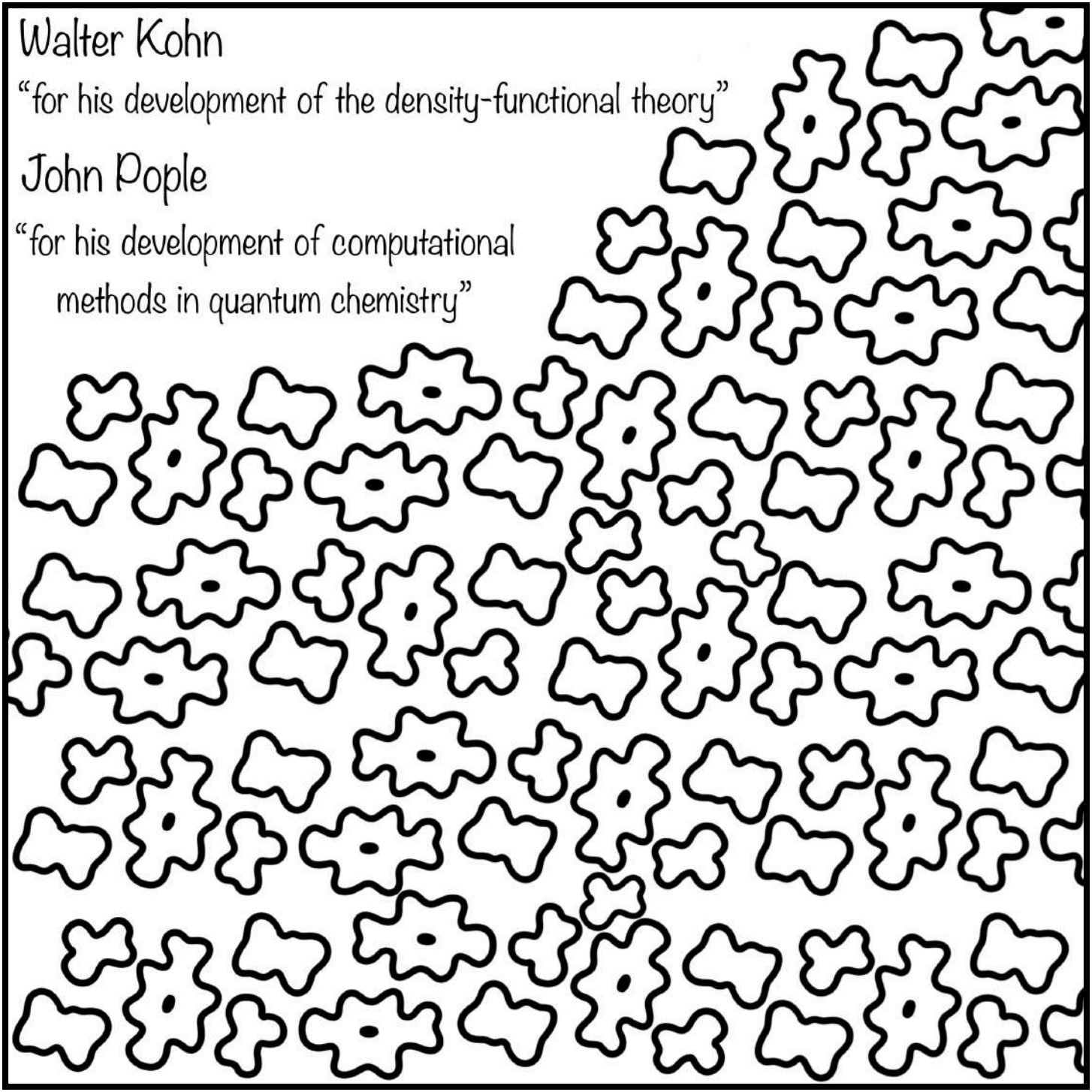
1998 - Color the molecular electron density:

Walter Kohn

"for his development of the density-functional theory"

John Pople

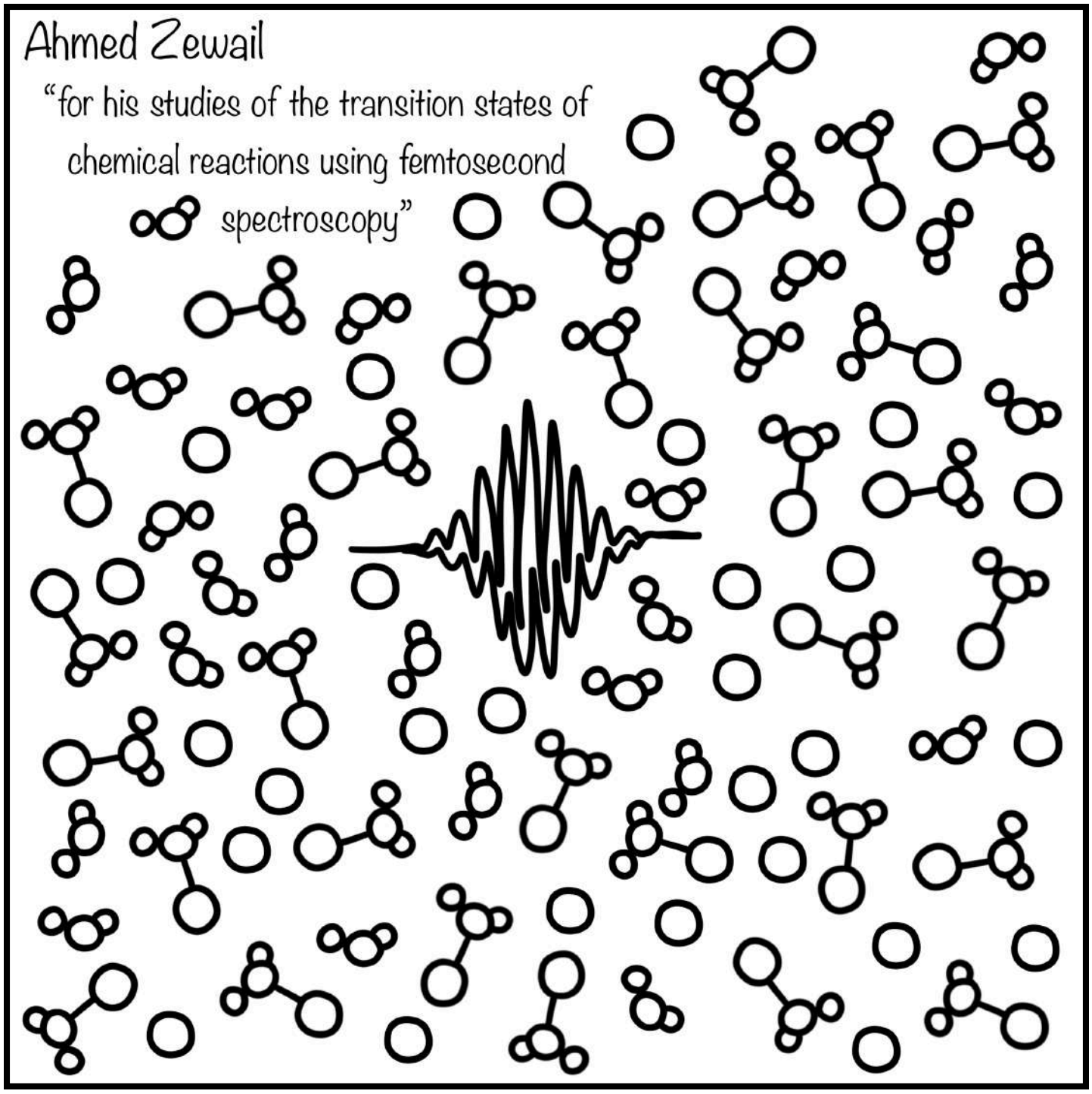
"for his development of computational methods in quantum chemistry"



1999 - Color the CH_3I dissociation:

Ahmed Zewail

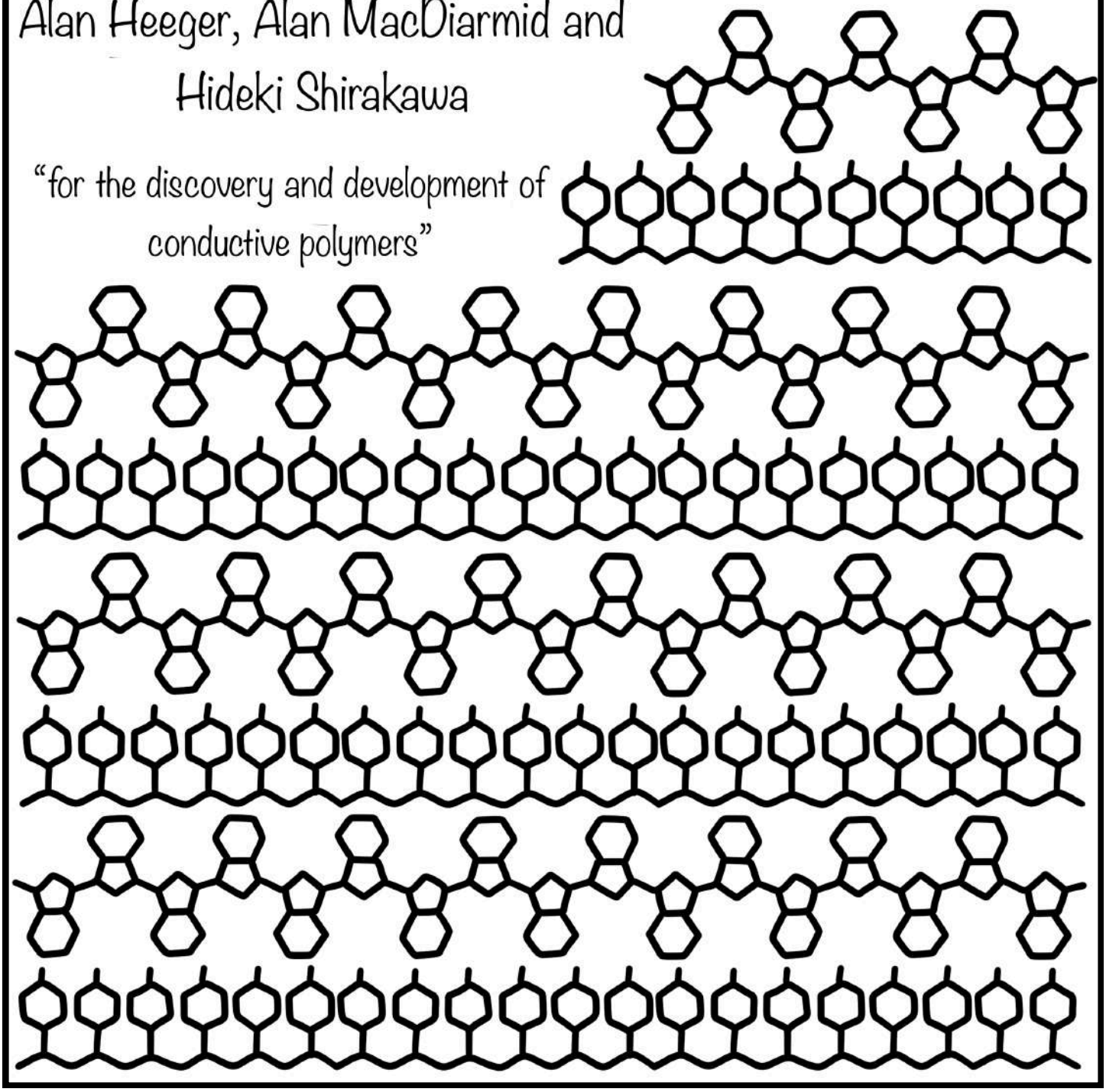
"for his studies of the transition states of chemical reactions using femtosecond spectroscopy"



2000 - Color the PEDOT/PSS:

Alan Heeger, Alan MacDiarmid and Hideki Shirakawa

"for the discovery and development of conductive polymers"



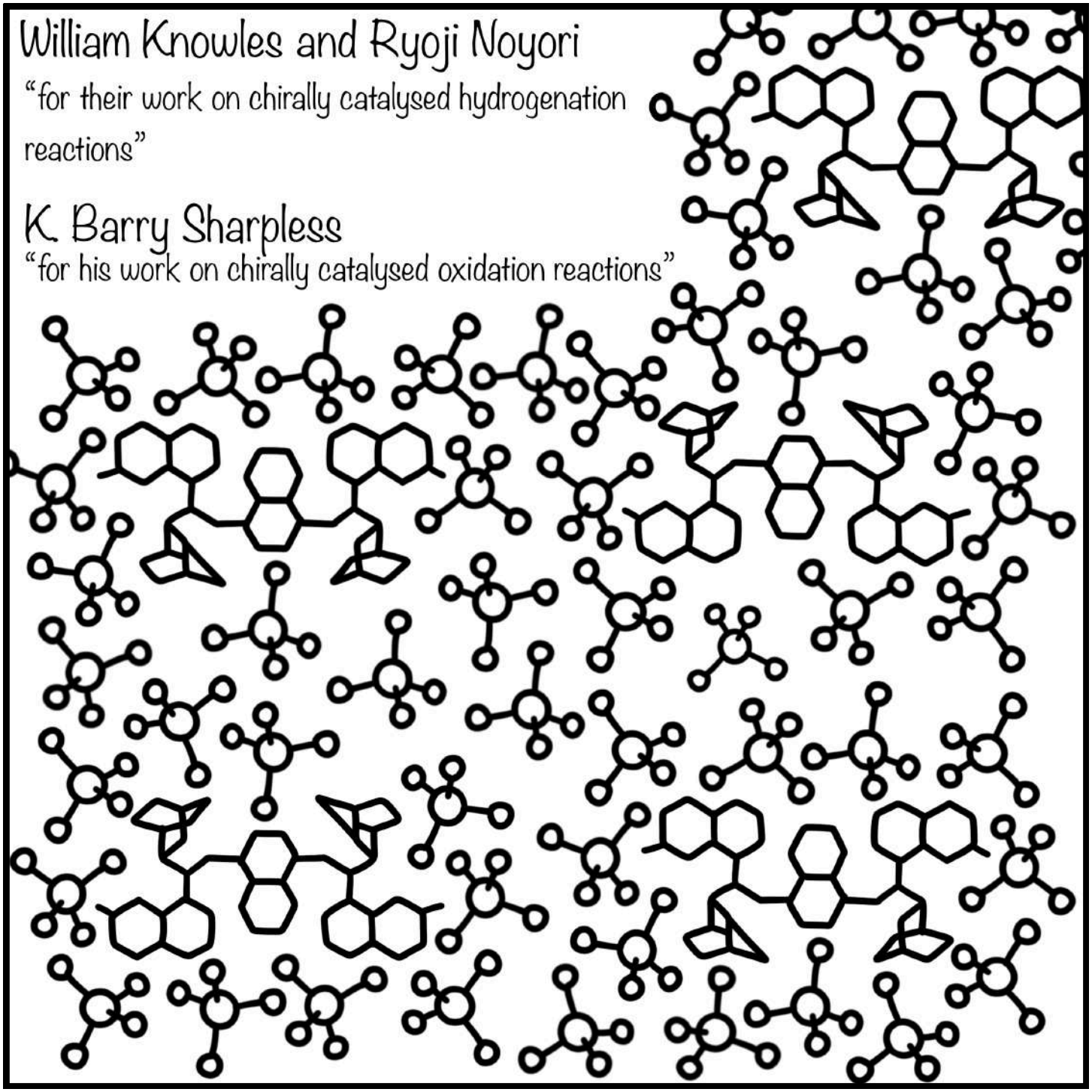
2001 - Color the osmium oxide and PHAL:

William Knowles and Ryoji Noyori

"for their work on chirally catalysed hydrogenation reactions"

K. Barry Sharpless

"for his work on chirally catalysed oxidation reactions"



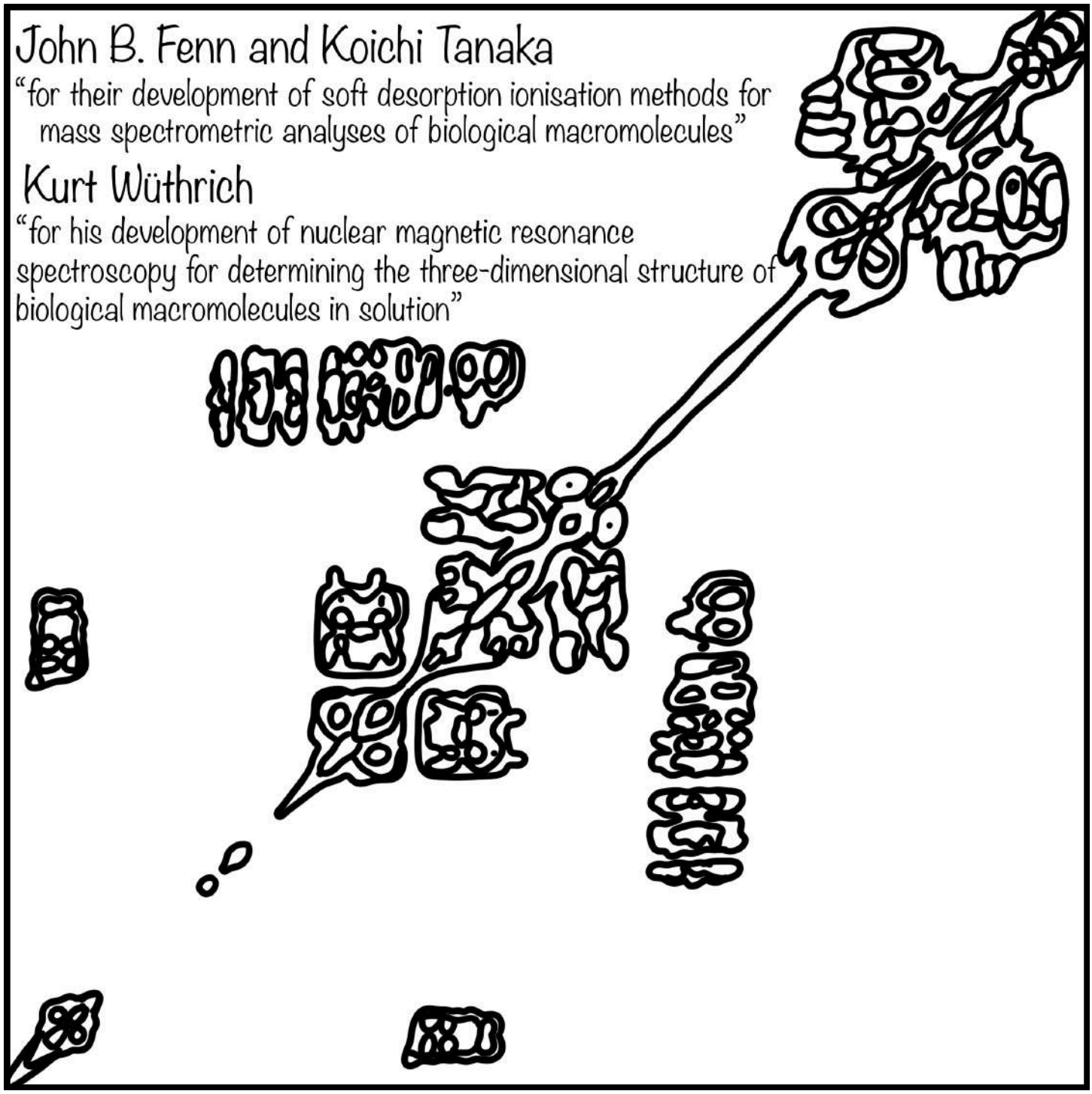
2002 - Color the 2D NMR:

John B. Fenn and Koichi Tanaka

"for their development of soft desorption ionisation methods for mass spectrometric analyses of biological macromolecules"

Kurt Wüthrich

"for his development of nuclear magnetic resonance spectroscopy for determining the three-dimensional structure of biological macromolecules in solution"



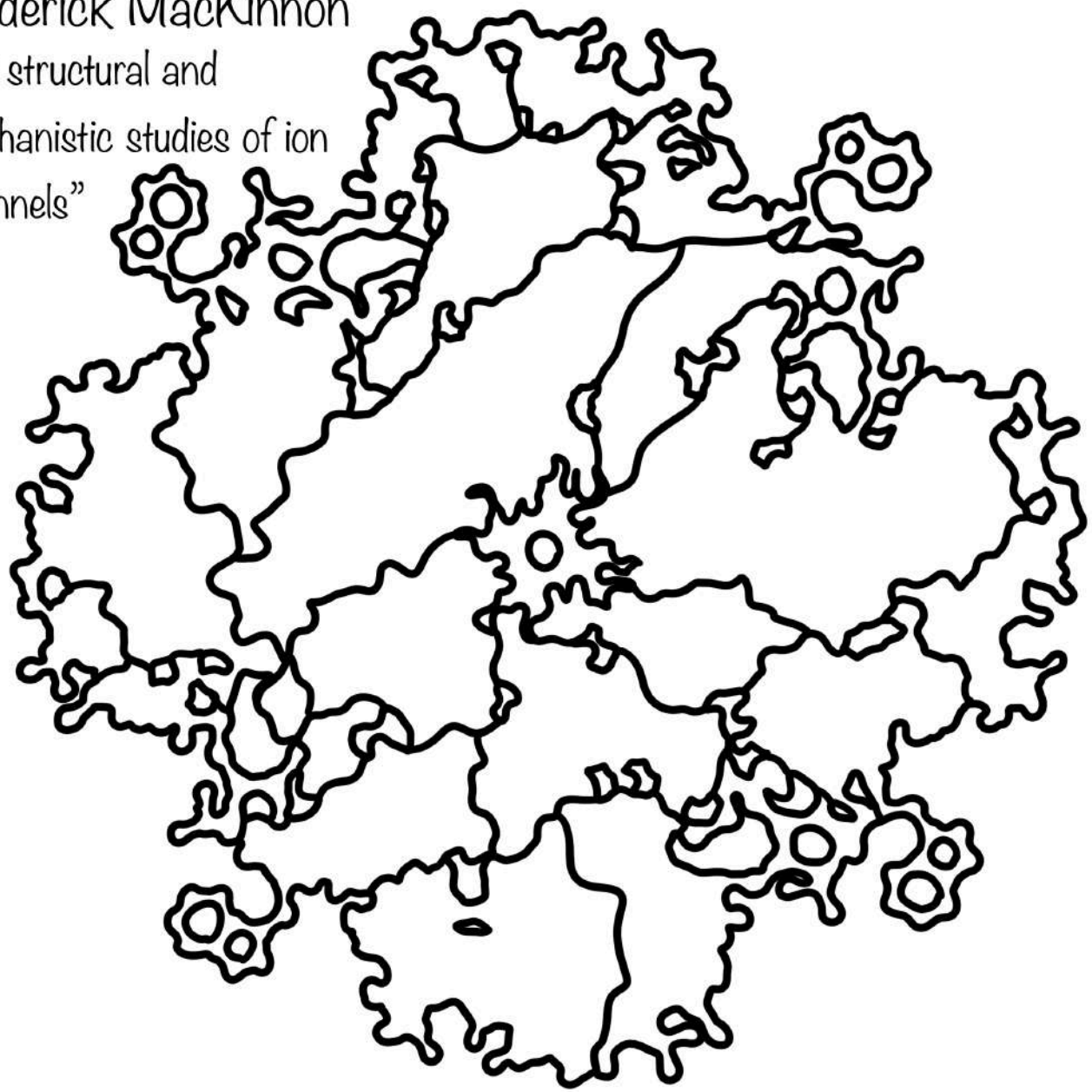
2003 - Color the potassium channel:

Peter Agre

"for the discovery of water channels"

Roderick MacKinnon

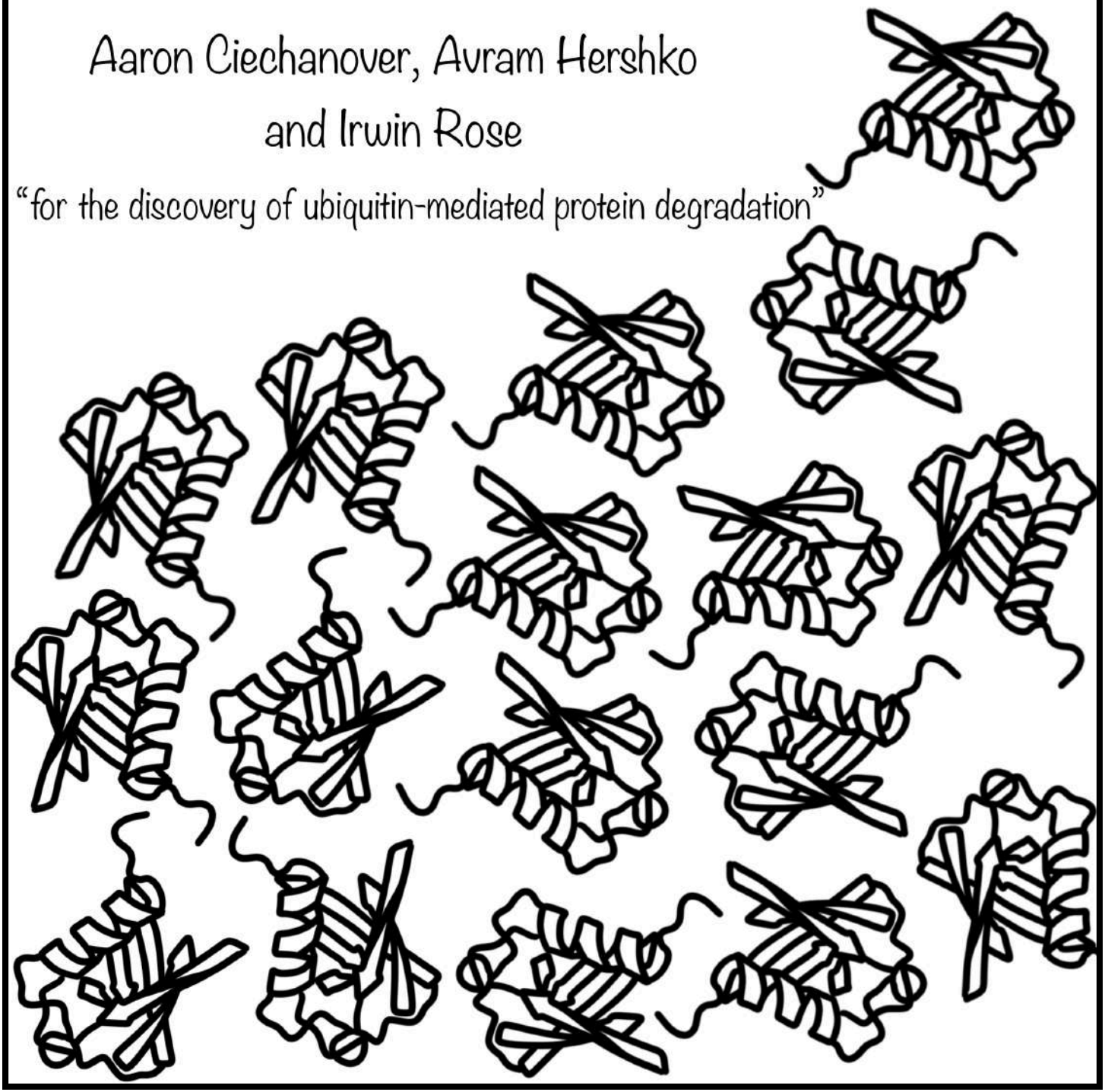
"for structural and mechanistic studies of ion channels"



2004 - Color the ubiquitin:

Aaron Ciechanover, Avram Hershko
and Irwin Rose

"for the discovery of ubiquitin-mediated protein degradation"



2005 - Color the Grubbs catalyst:

. = oxygen

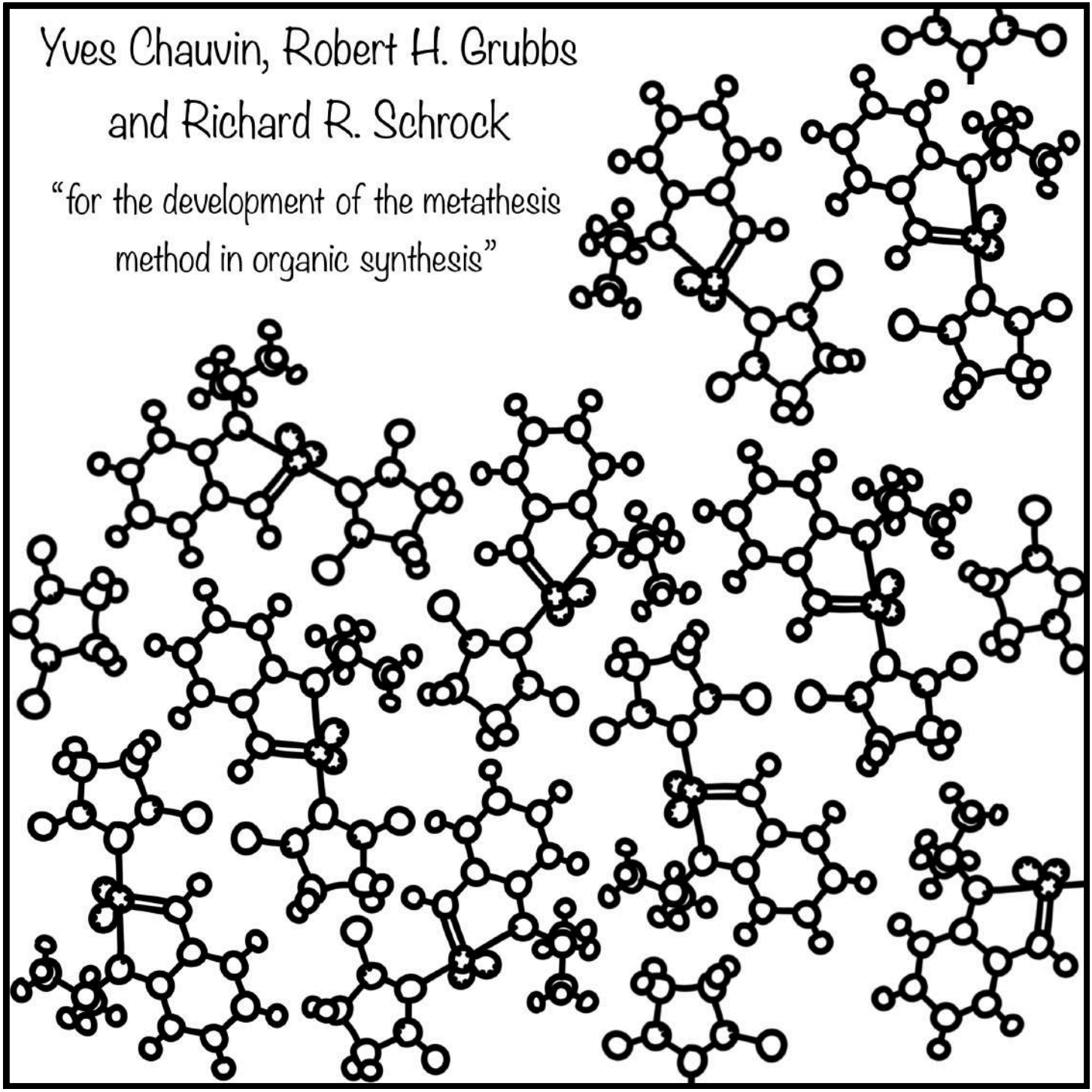
.. = nitrogen

... = chlorine

.... = ruthenium

Yves Chauvin, Robert H. Grubbs
and Richard R. Schrock

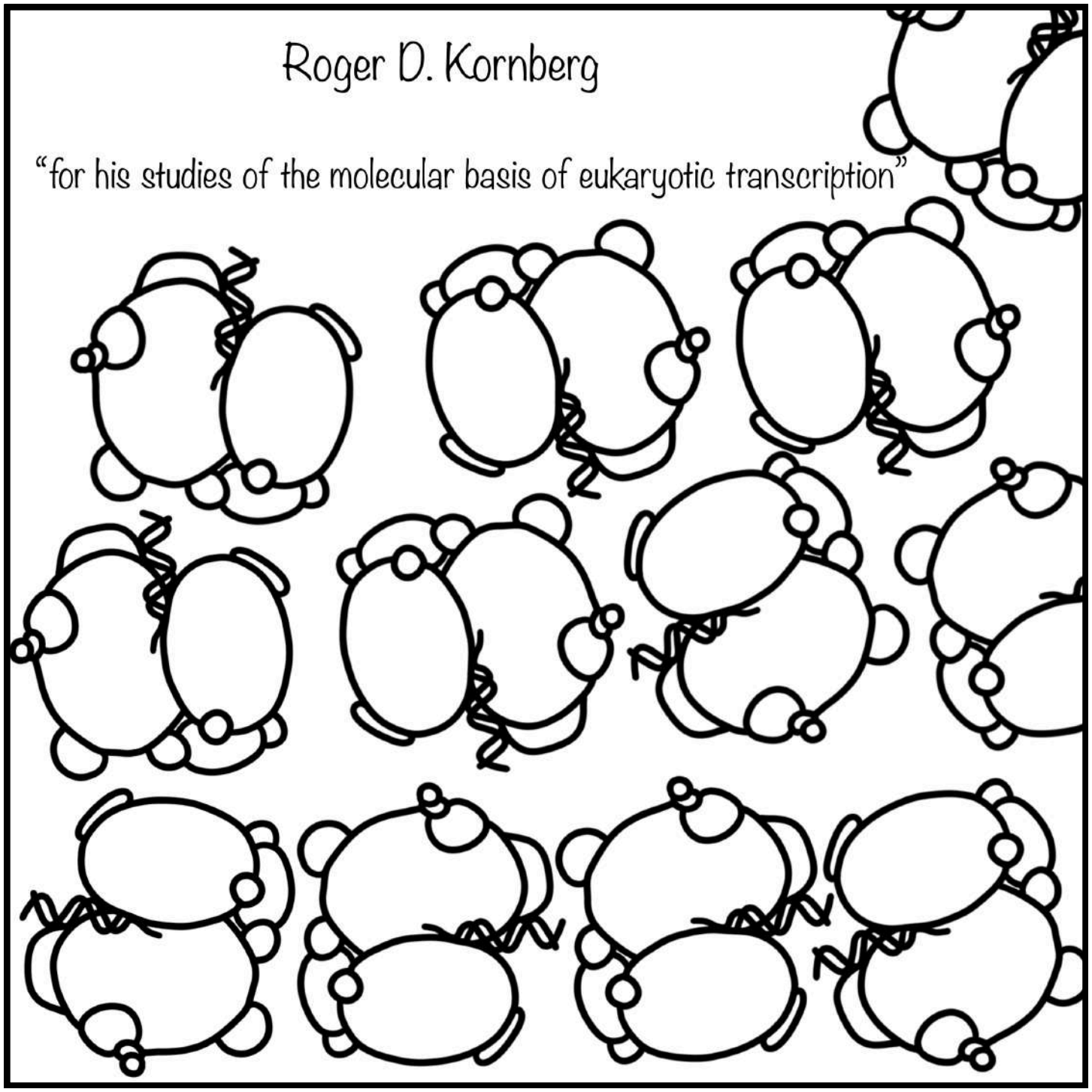
"for the development of the metathesis
method in organic synthesis"



2006 - Color the RNA polymerase:

Roger D. Kornberg

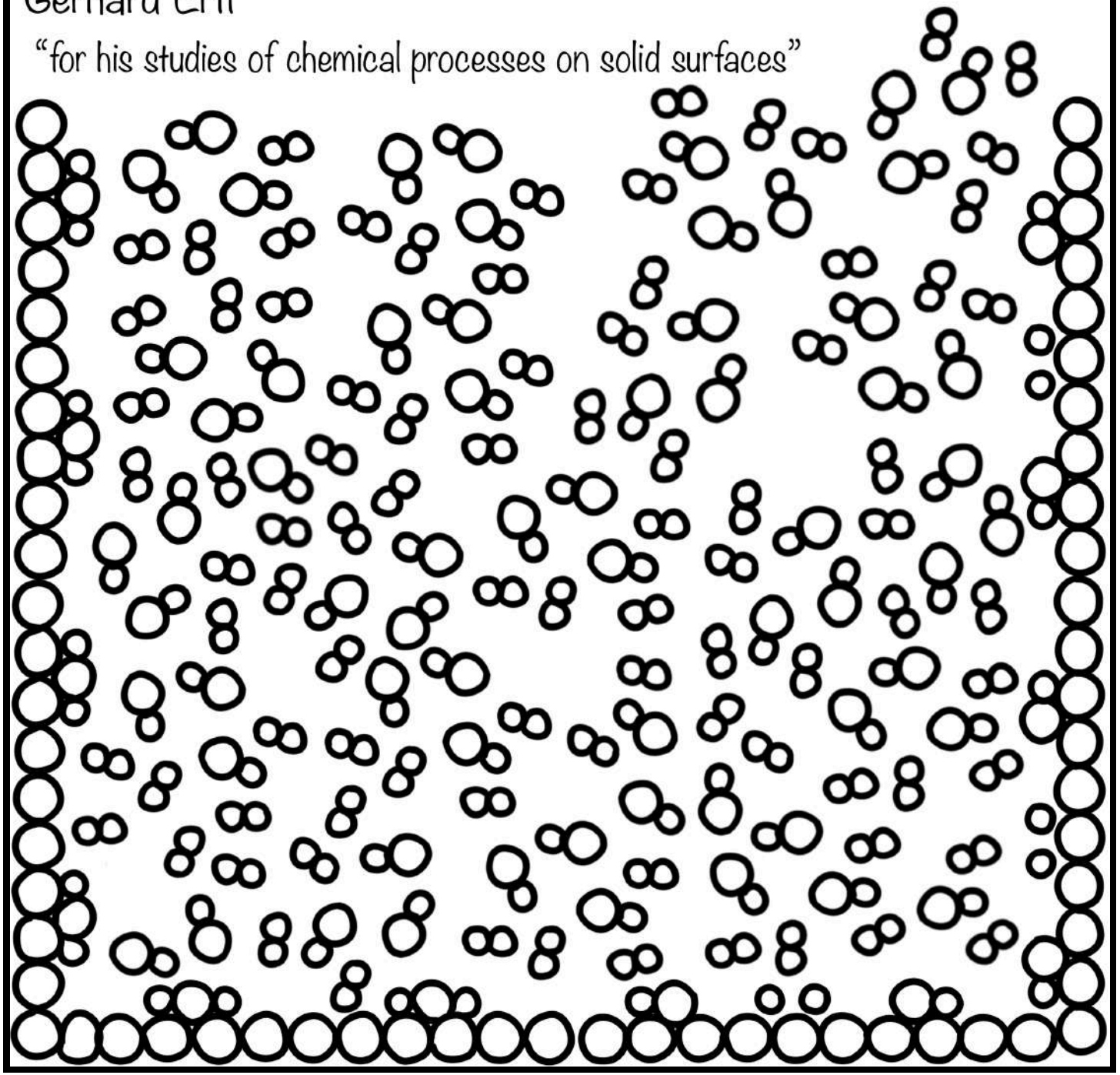
"for his studies of the molecular basis of eukaryotic transcription"



2007 - Color the platinum catalyst:

Gerhard Ertl

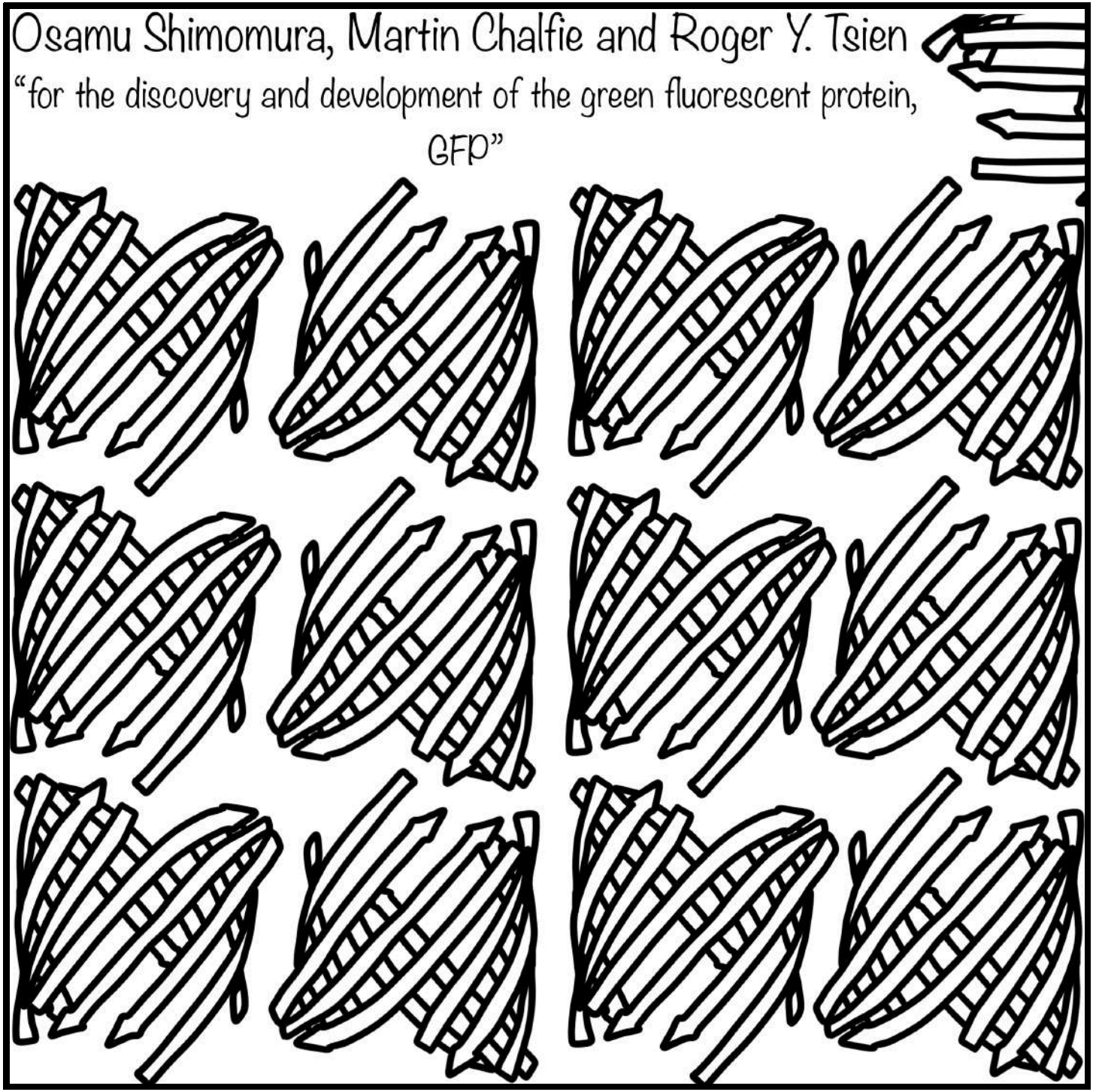
"for his studies of chemical processes on solid surfaces"



2008 - Color the GFP:

Osamu Shimomura, Martin Chalfie and Roger Y. Tsien

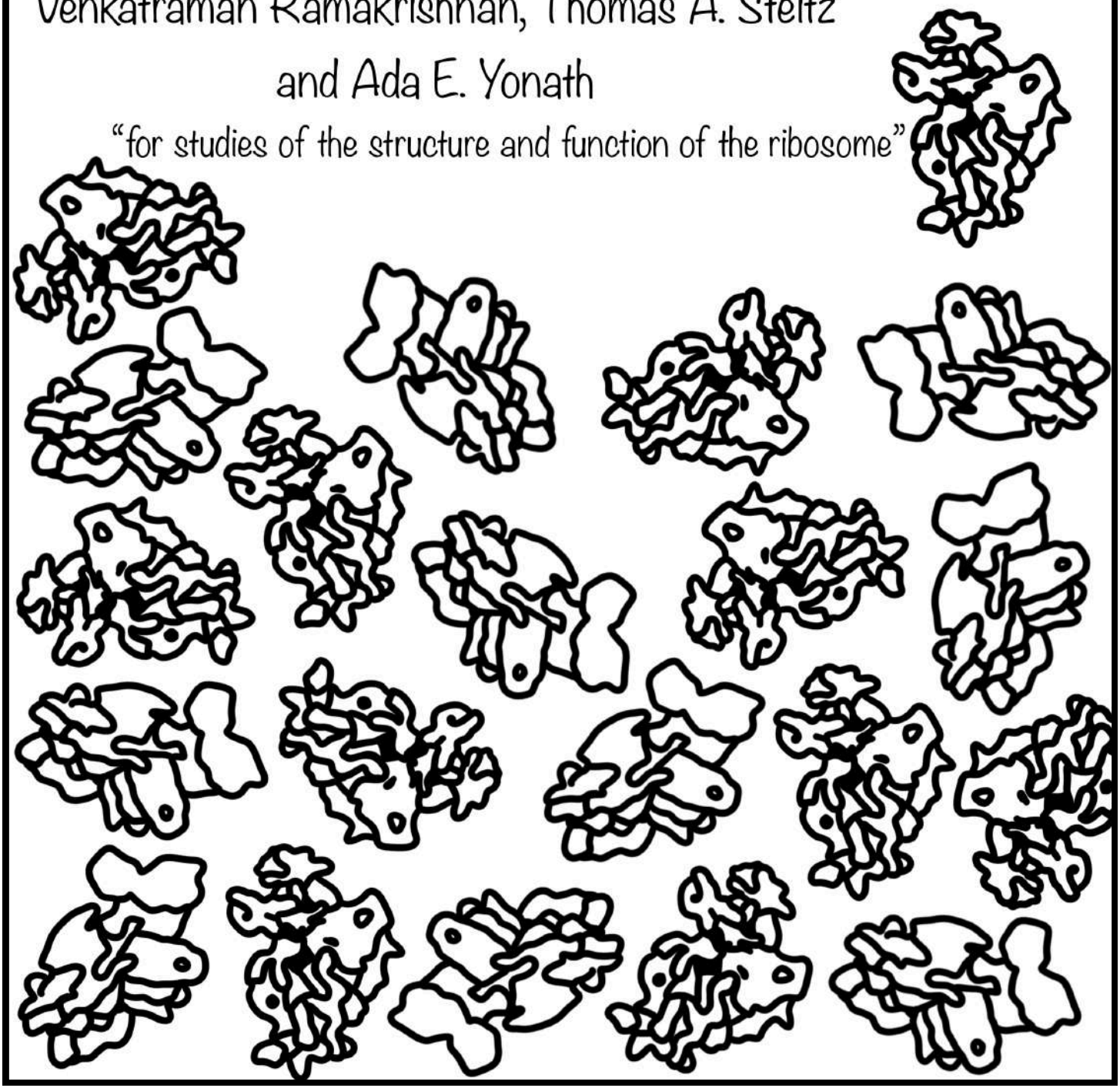
"for the discovery and development of the green fluorescent protein, GFP"



2009 - Color the ribosome:

Venkatraman Ramakrishnan, Thomas A. Steitz and Ada E. Yonath

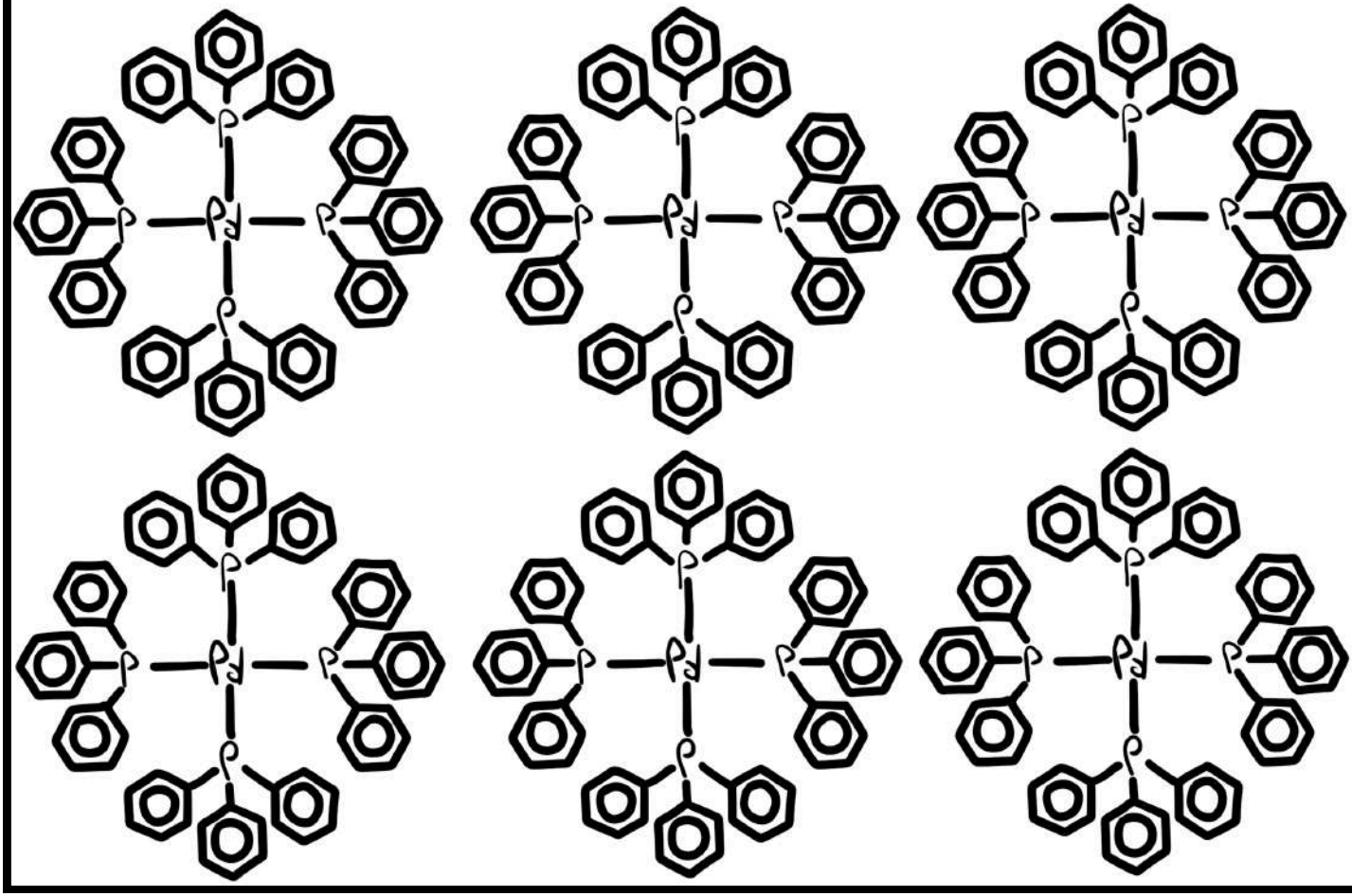
"for studies of the structure and function of the ribosome"



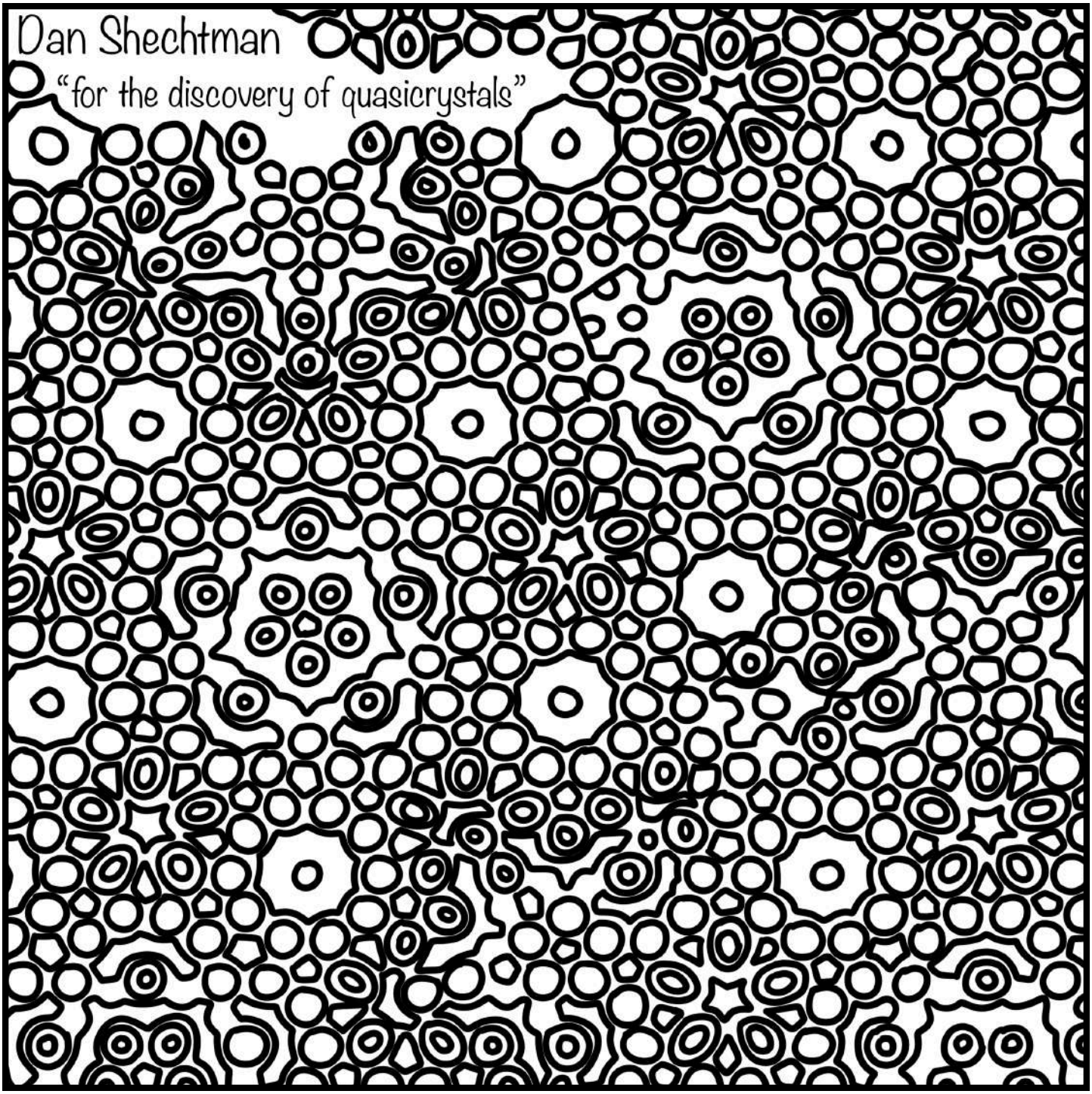
2010 - Color the palladium catalyst:

Richard F. Heck, Ei-ichi Negishi and Akira Suzuki

"for palladium-catalyzed cross couplings in organic synthesis"



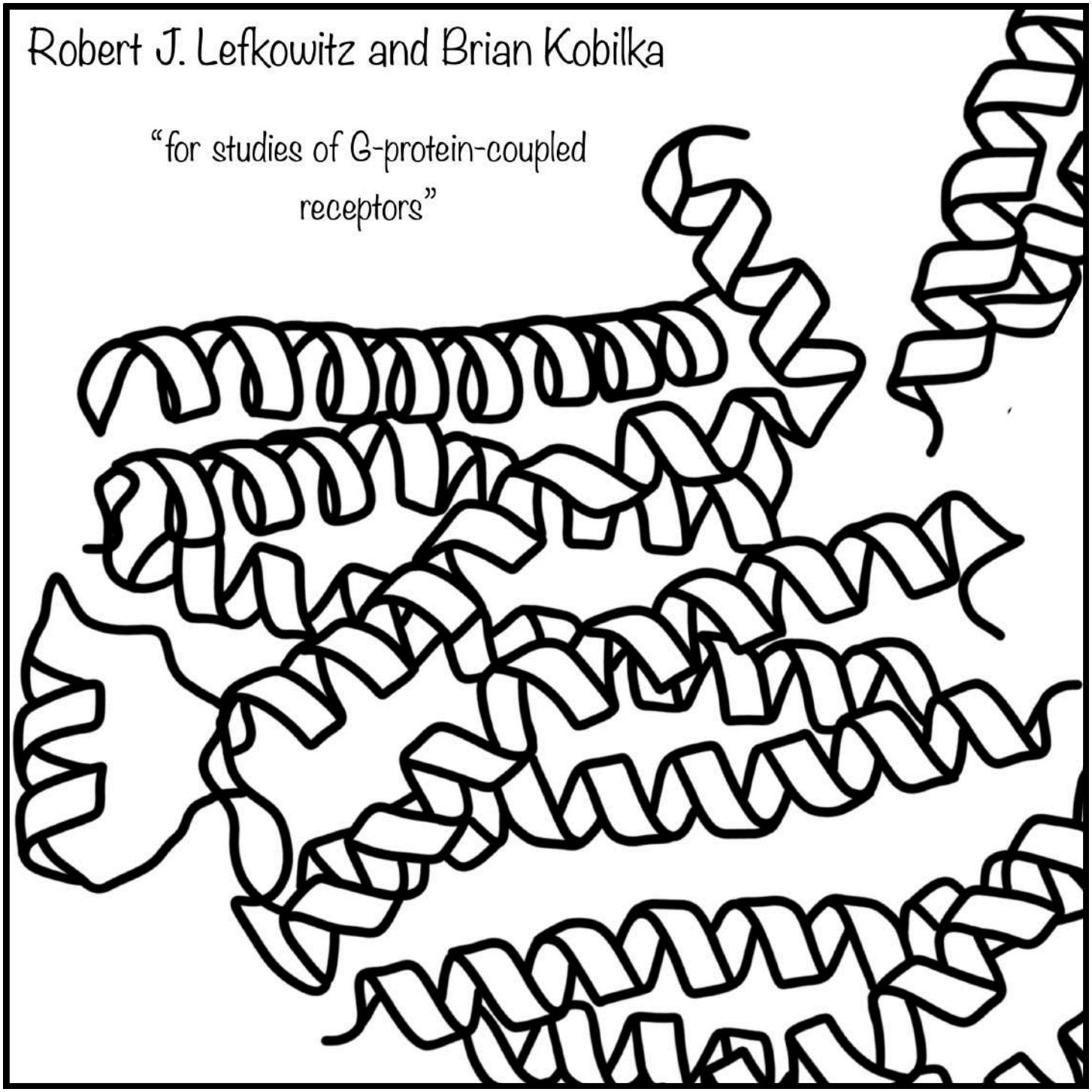
2011 - Color the quasicrystal:


Dan Shechtman
"for the discovery of quasicrystals"

2012 - Color the adrenergic receptor:

Robert J. Lefkowitz and Brian Kobilka

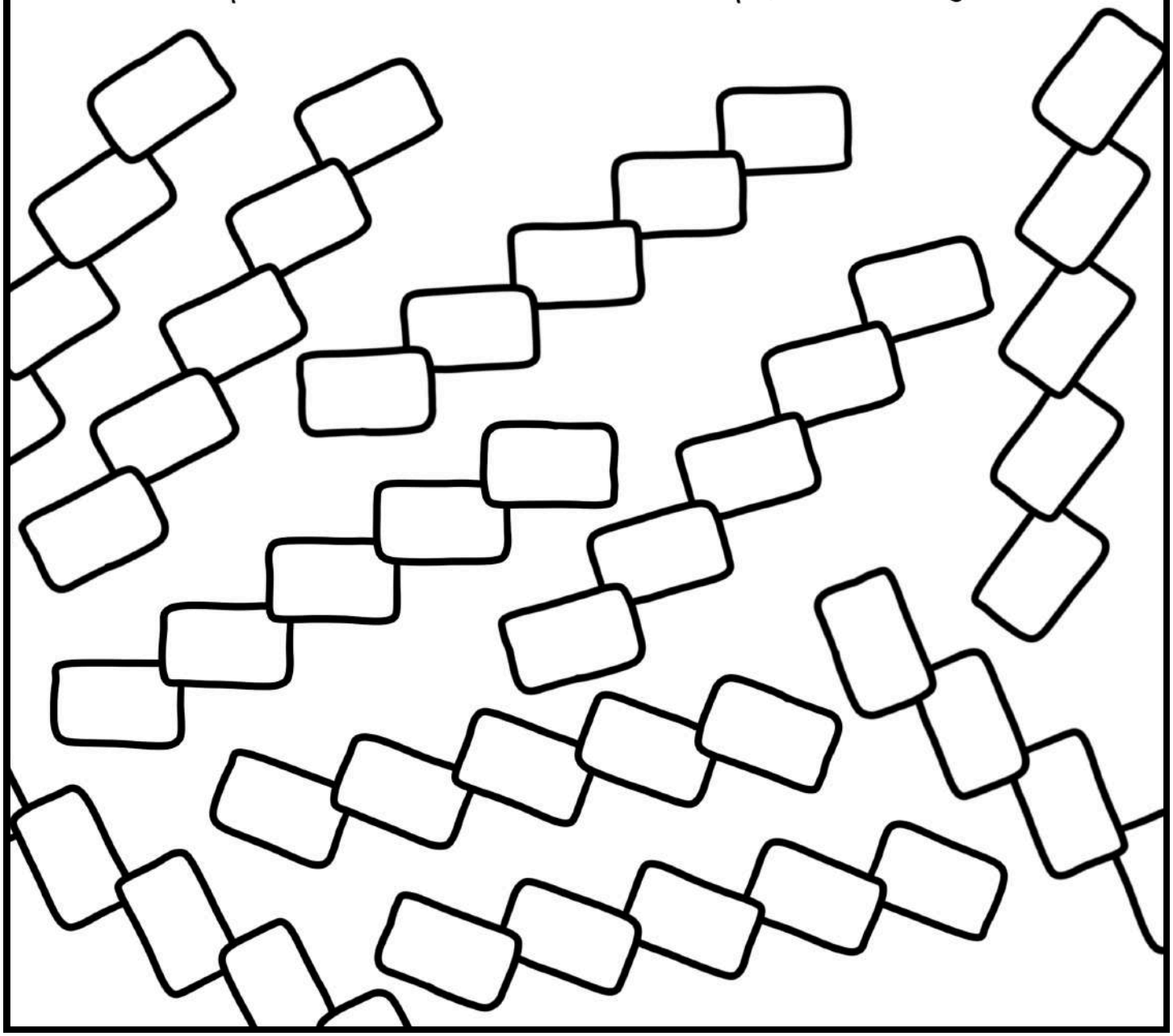
"for studies of G-protein-coupled receptors"



2013 - Color the jumps in space and time:

Martin Karplus, Michael Levitt and Arieh Warshel

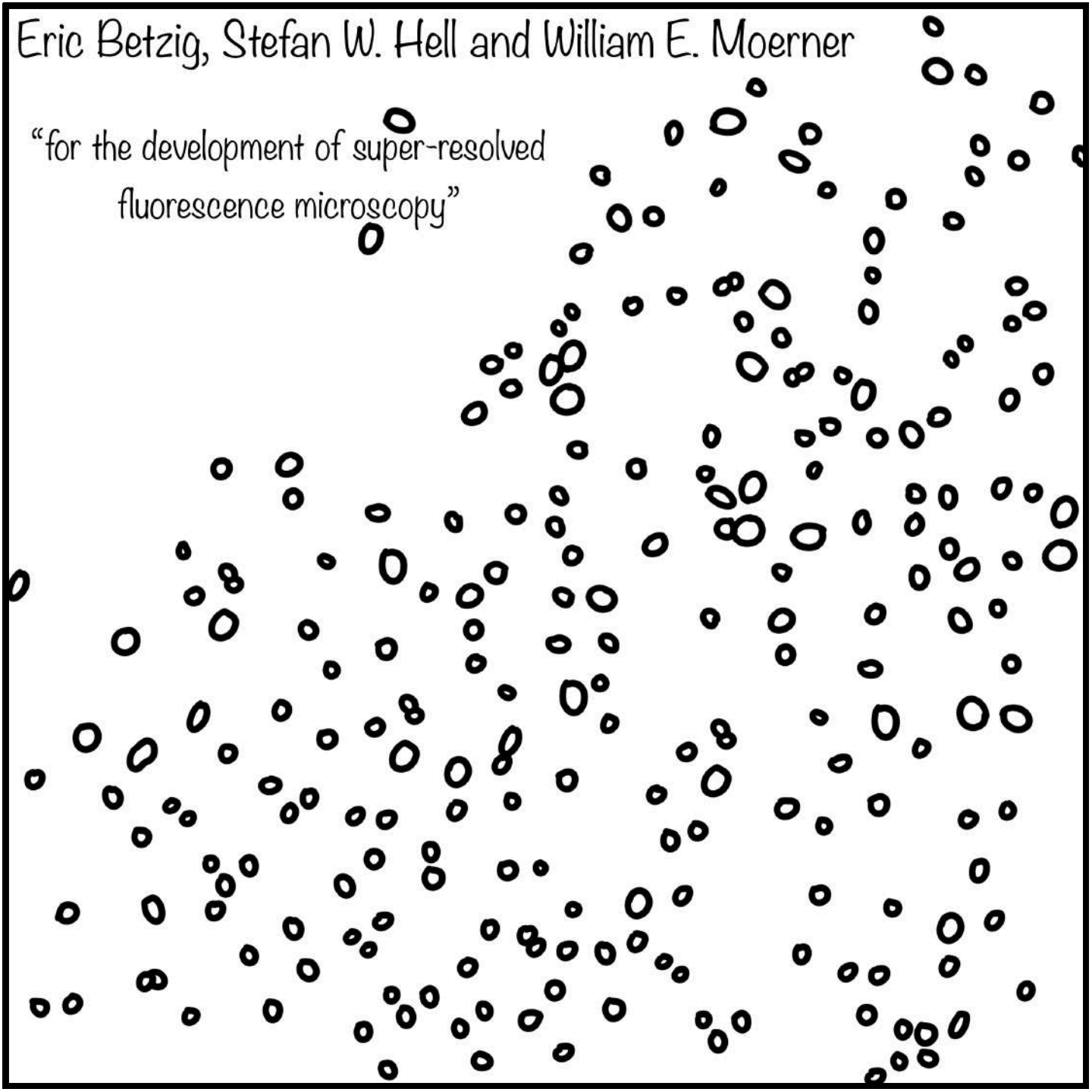
"for the development of multiscale models for complex chemical systems"



2014 - Color the fluorescent dots:

Eric Betzig, Stefan W. Hell and William E. Moerner

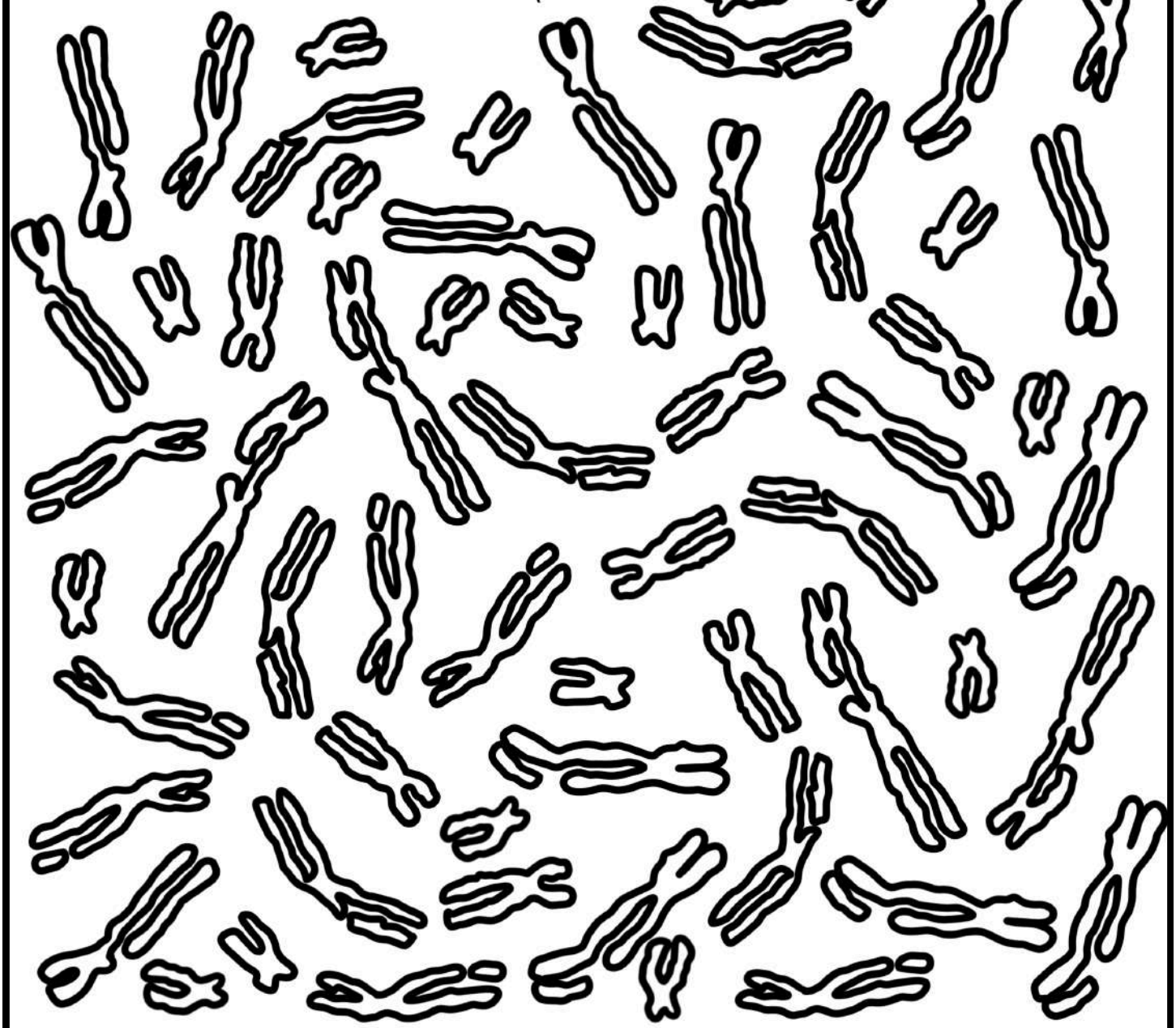
"for the development of super-resolved fluorescence microscopy"



2015 - Color the damaged chromosomes:

Tomas Lindahl, Paul Modrich and Aziz Sancar

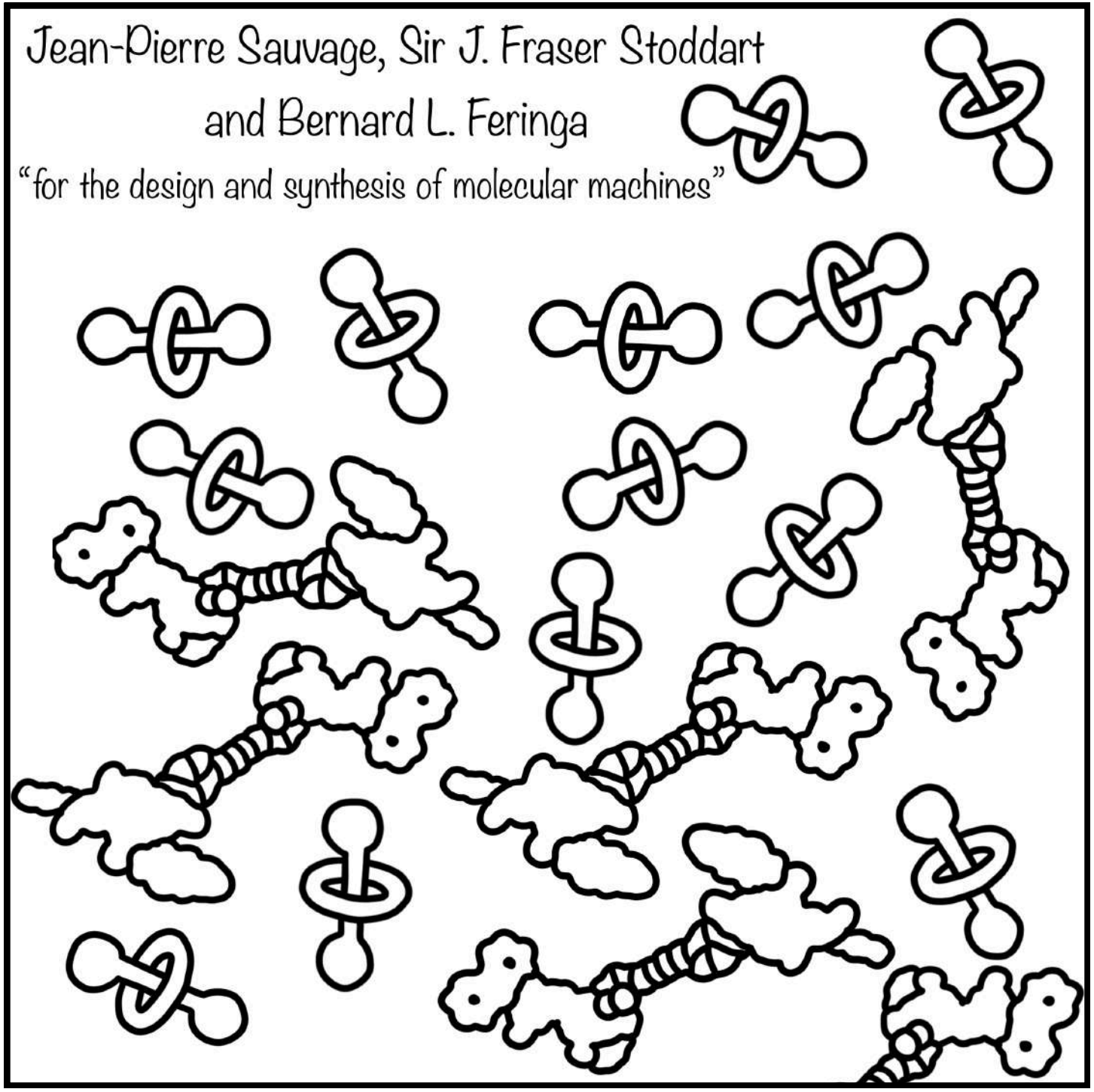
"for mechanistic studies of DNA repair"



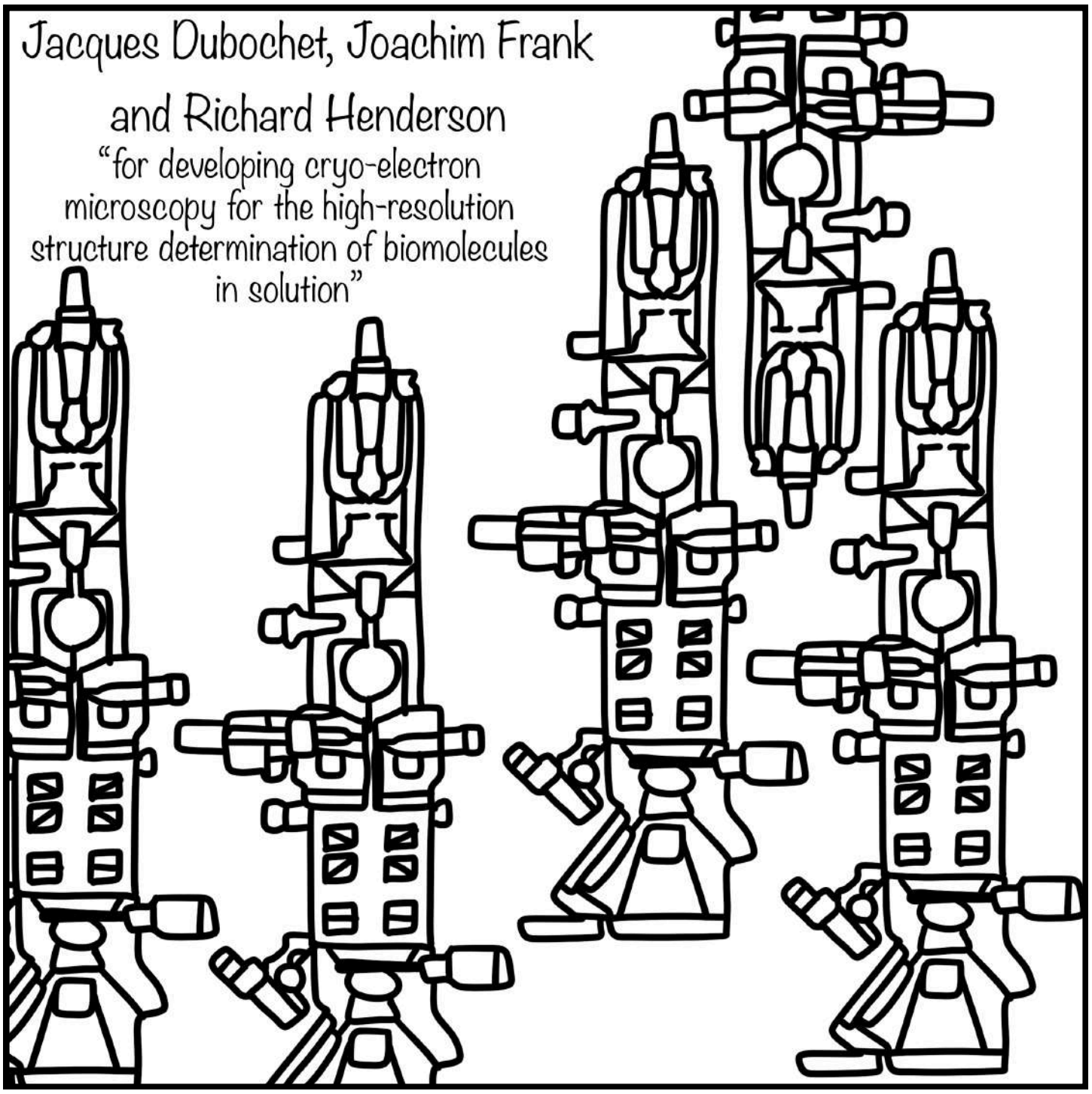
2016 - Color the molecular machines:

Jean-Pierre Sauvage, Sir J. Fraser Stoddart and Bernard L. Feringa

"for the design and synthesis of molecular machines"



2017 - Color the TEM:


Jacques Dubochet, Joachim Frank
and Richard Henderson
"for developing cryo-electron microscopy for the high-resolution structure determination of biomolecules in solution"

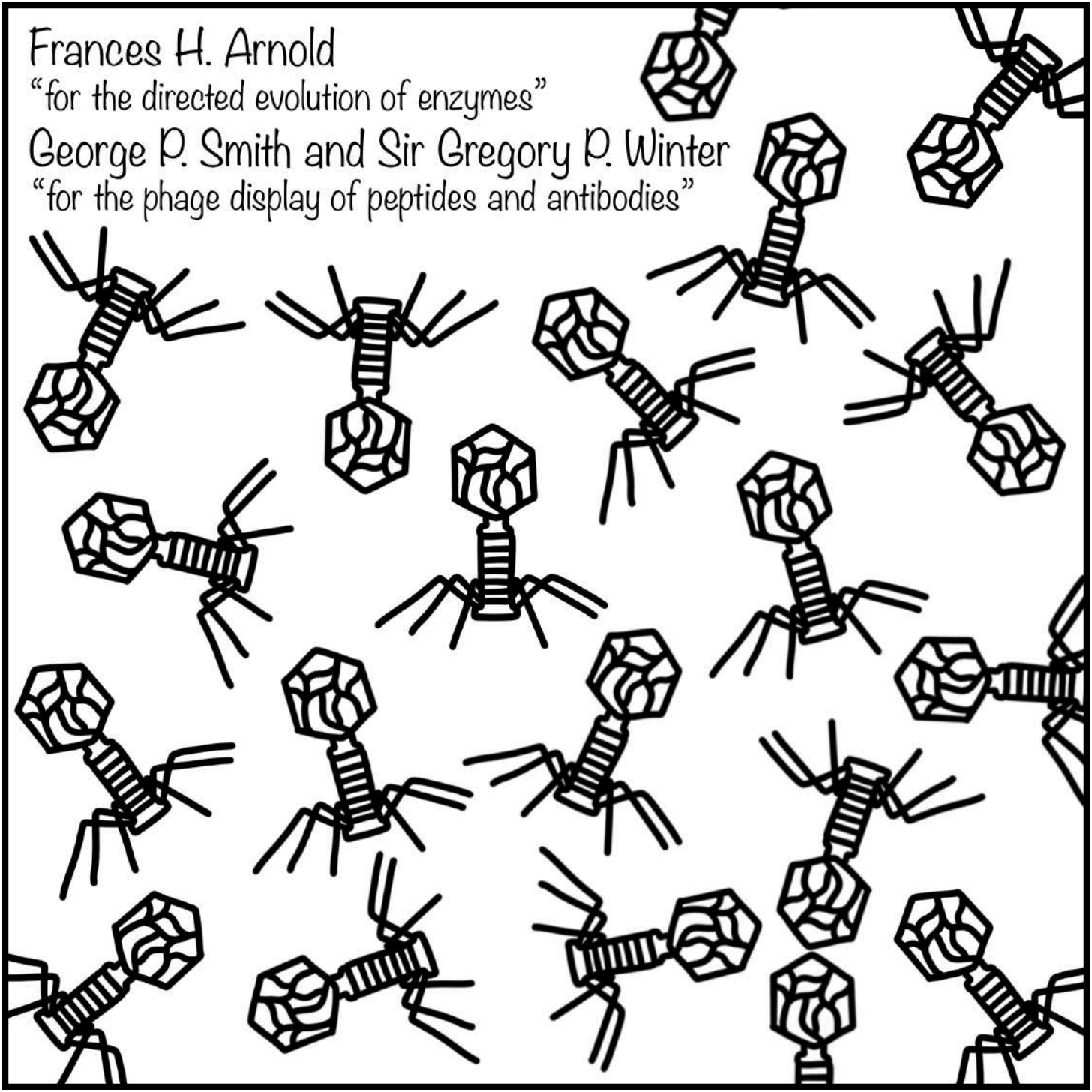
2018 - Color the viruses:

Frances H. Arnold

"for the directed evolution of enzymes"

George P. Smith and Sir Gregory P. Winter

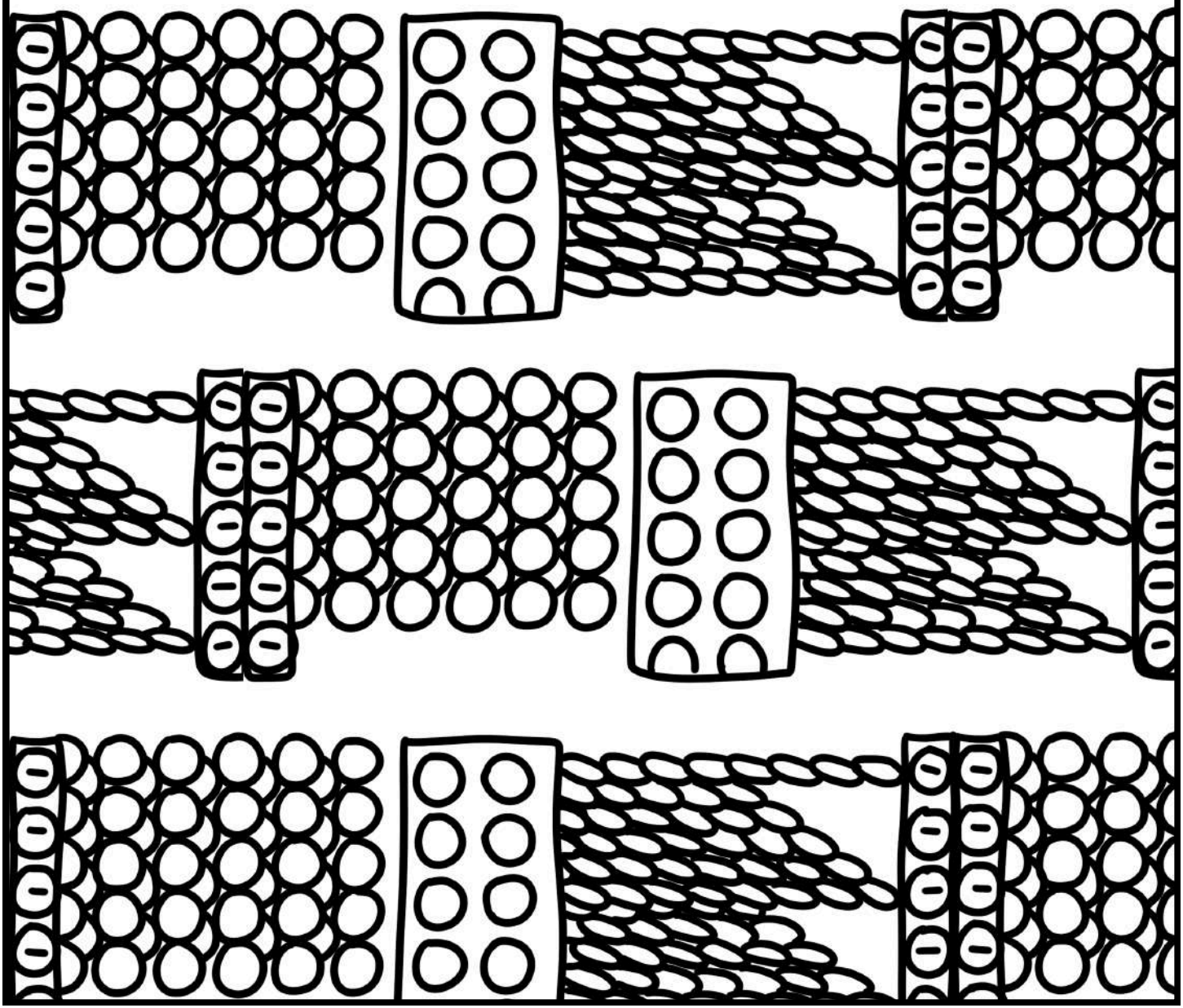
"for the phage display of peptides and antibodies"



2019 - Color the Li-ion battery:

John B. Goodenough, M. Stanley Whittingham and Akira Yoshino

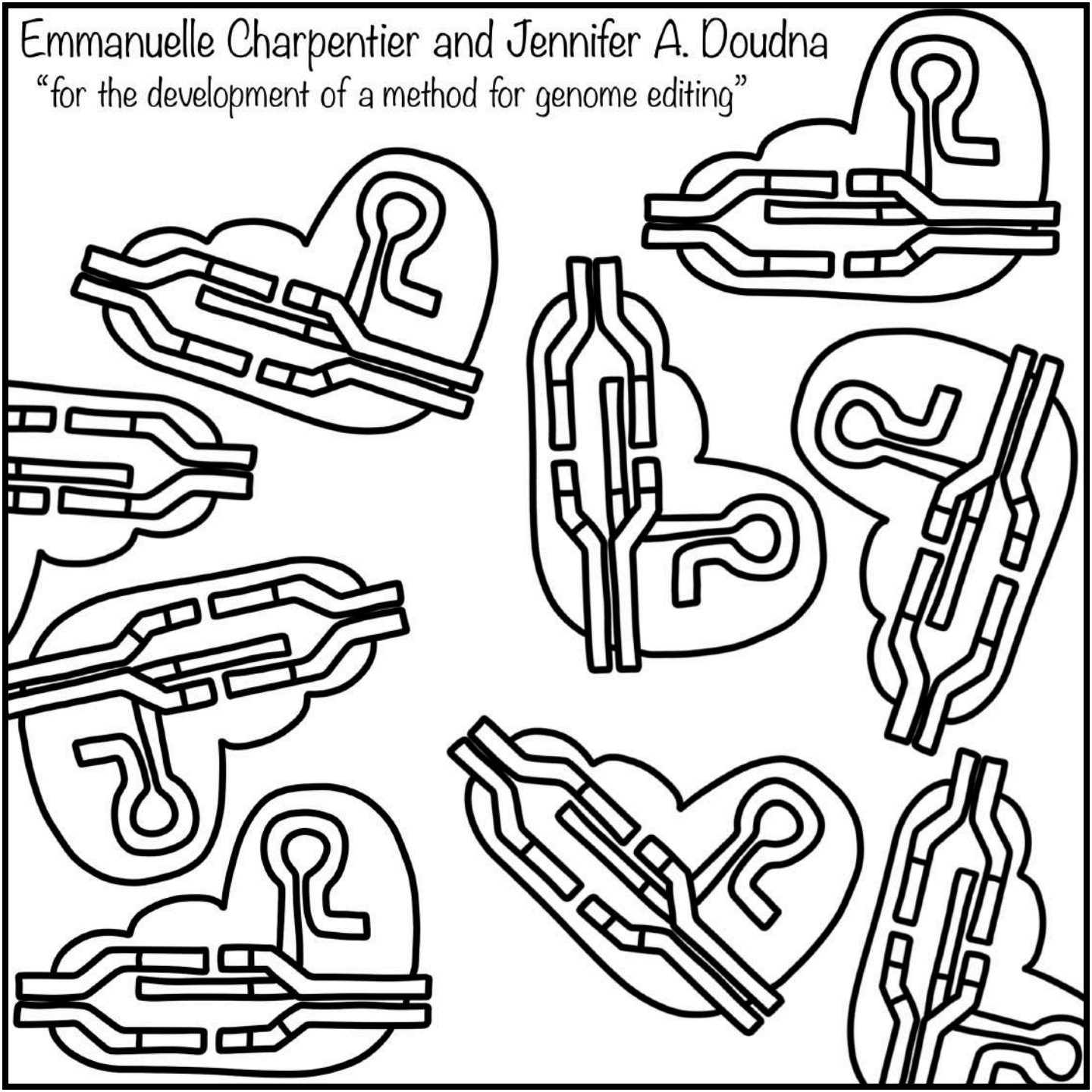
"for the development of lithium-ion batteries"



2020 - Color the CRISPR CAS:

Emmanuelle Charpentier and Jennifer A. Doudna

"for the development of a method for genome editing"



2021 - Color the MacMillan catalyst and the proline:

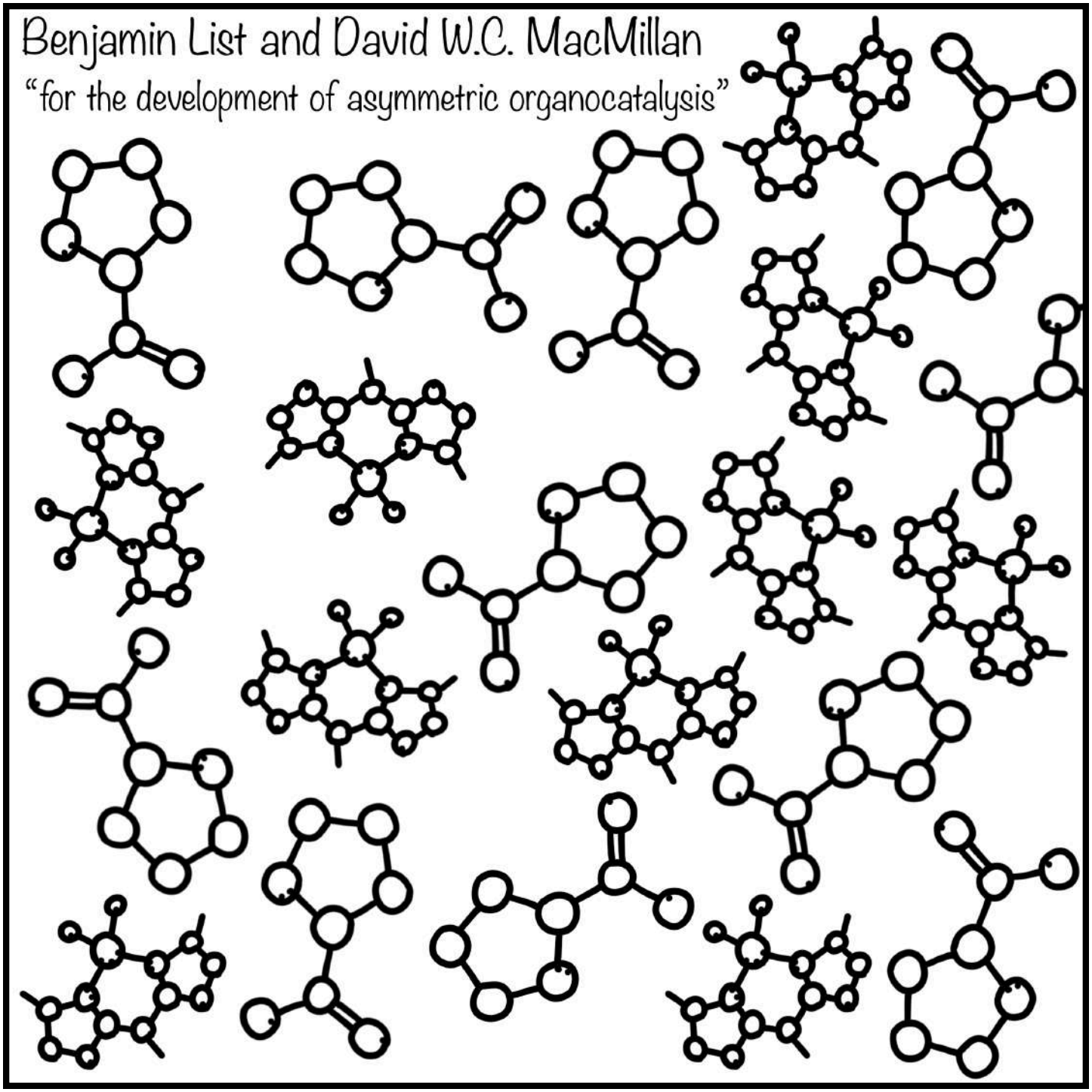
. = oxygen

.. = nitrogen

... = copper

Benjamin List and David W.C. MacMillan

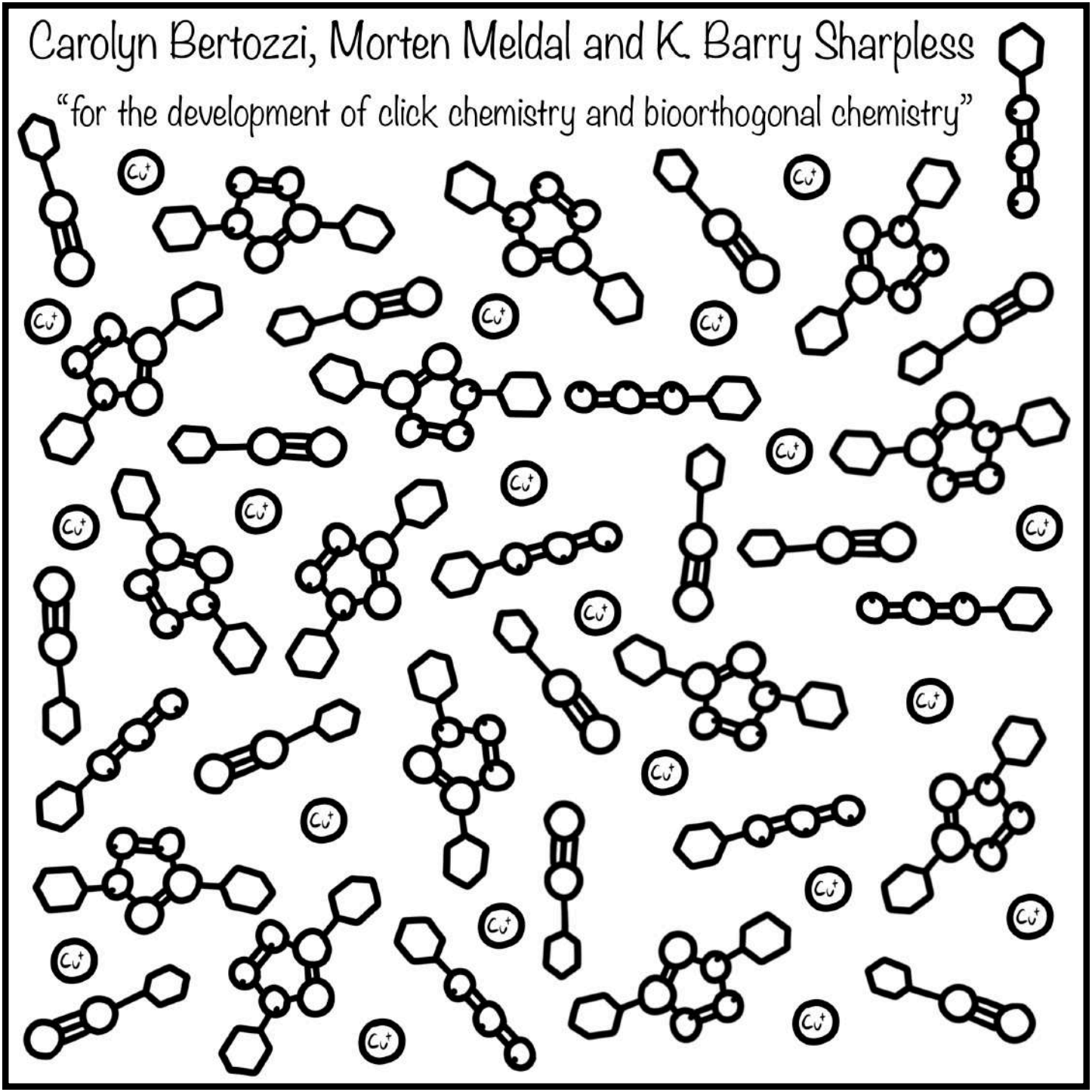
"for the development of asymmetric organocatalysis"



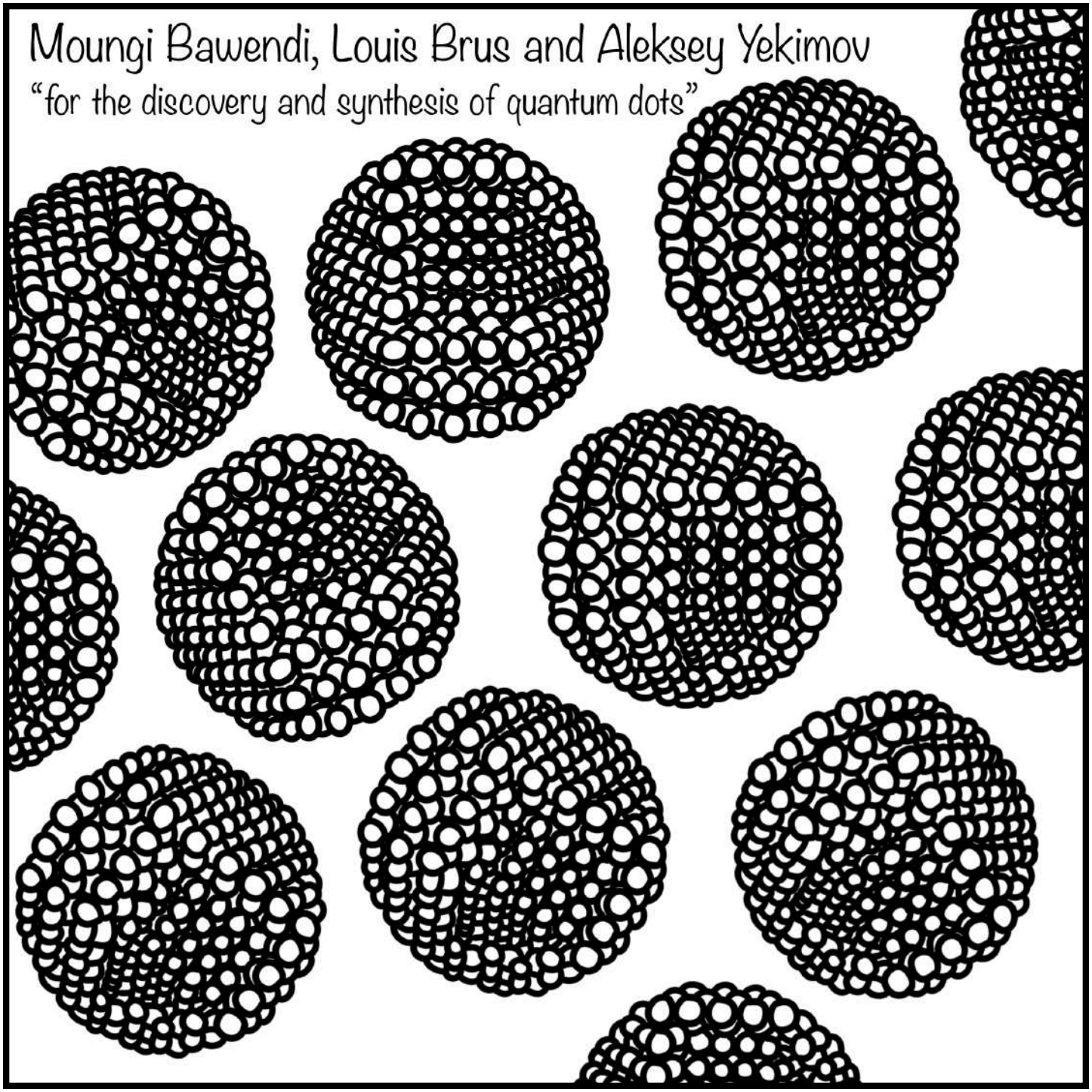
2022 - Color the azide alkyne click reaction:
. = nitrogen

Carolyn Bertozzi, Morten Meldal and K. Barry Sharpless

"for the development of click chemistry and bioorthogonal chemistry"



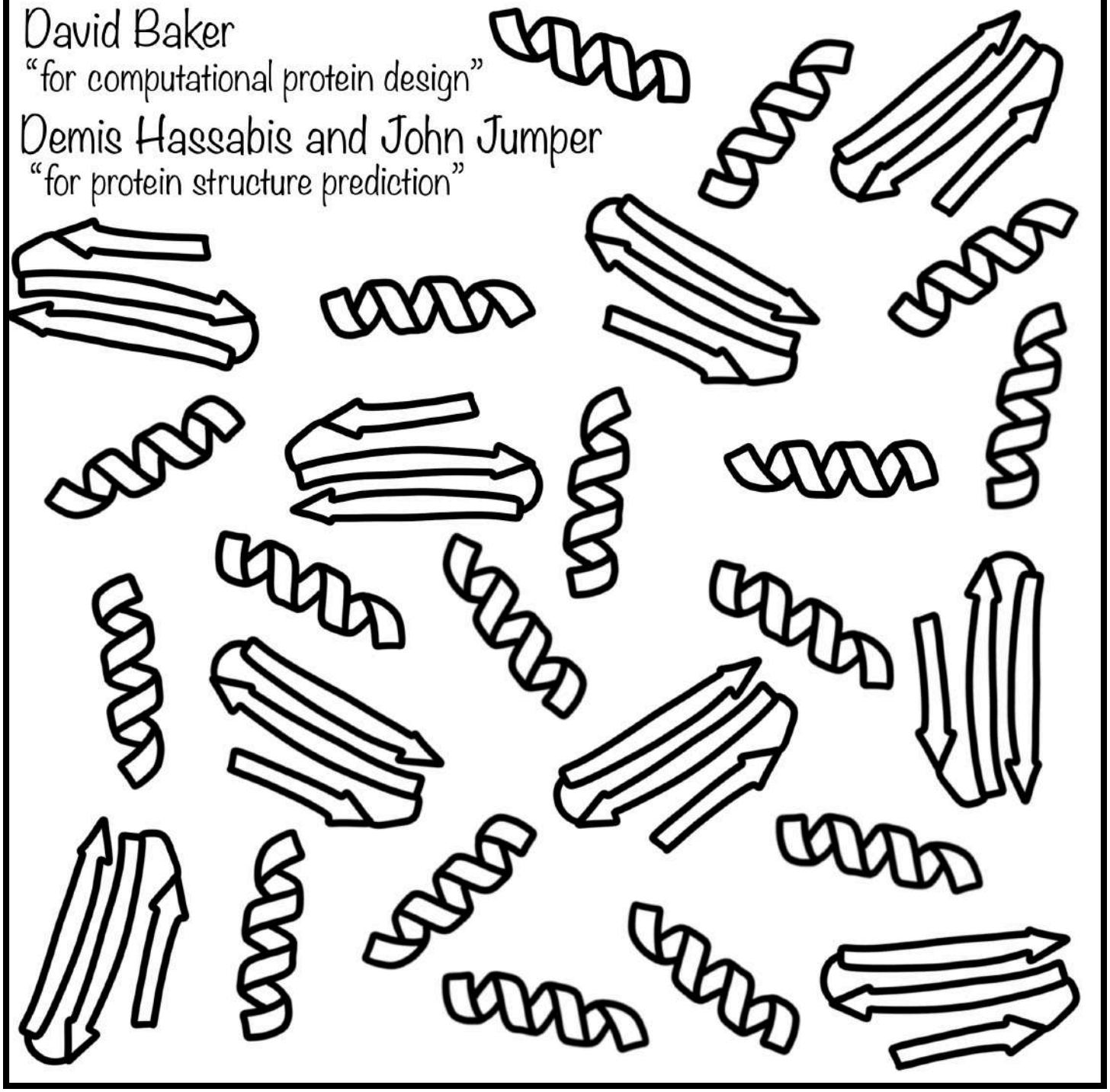
2023 - Color the quantum dots:


Moungi Bawendi, Louis Brus and Aleksey Yekimov
"for the discovery and synthesis of quantum dots"

2024 - Color the protein structures:

David Baker
"for computational protein design"

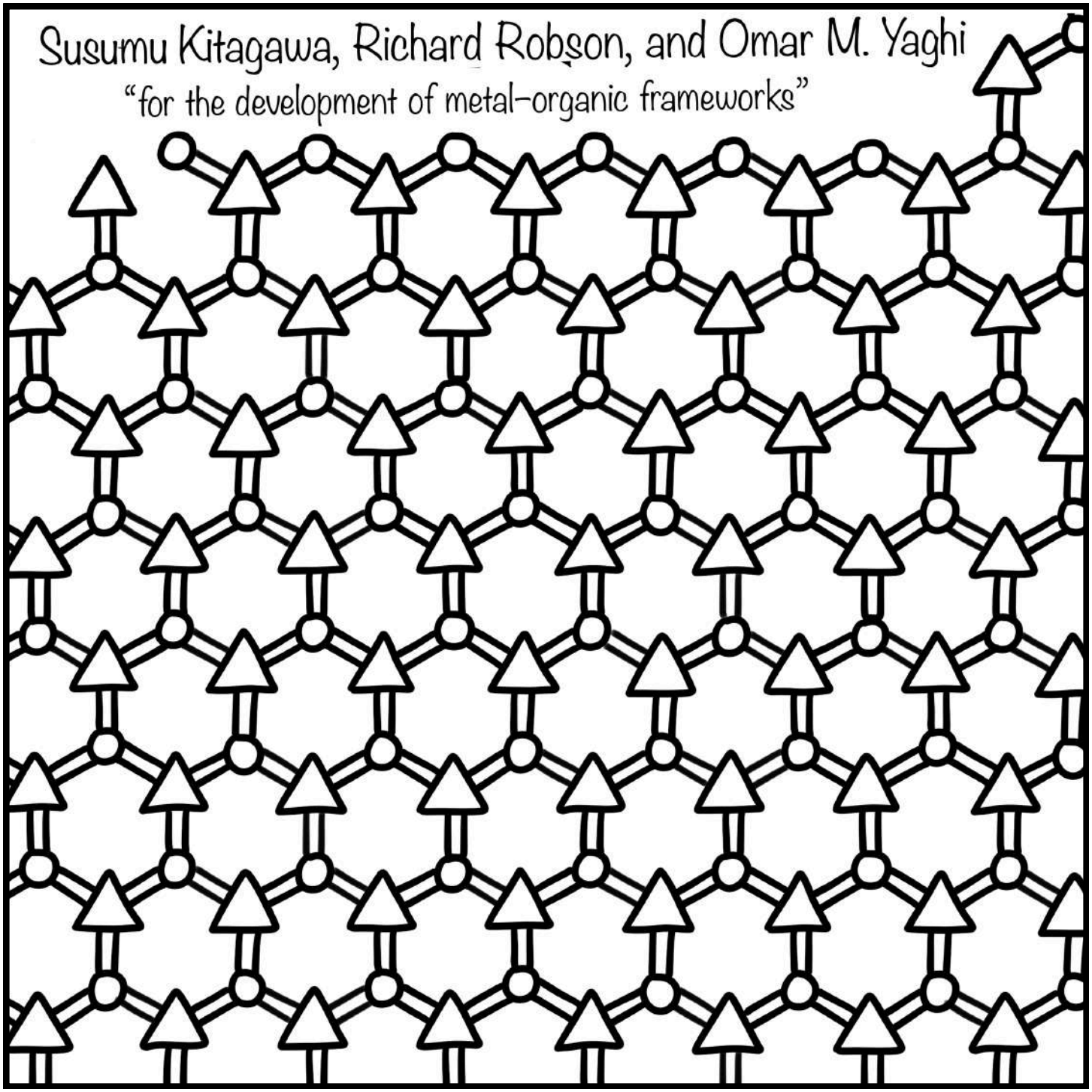
Demis Hassabis and John Jumper
"for protein structure prediction"



2024 - Color the MOF:

Susumu Kitagawa, Richard Robson, and Omar M. Yaghi

"for the development of metal-organic frameworks"



Thank you for joining me on this colorful journey through the history of chemistry. Every page you've brought to life with your colors represents a discovery that forever changed the way we understand the world.

You may have noticed that for each design, I included only a single line of text. I could have written long explanations, but instead I chose to leave space for curiosity. I hope that these short hints encourage you to go deeper on your own, to look up the scientists, their discoveries, and the fascinating stories behind them. In a way, it mirrors how science itself works: a spark of interest, followed by exploration, learning, and discovery.

This project has been a labor of love, drawn entirely by hand and guided by a wish to make chemistry both playful and inspiring. I'm grateful that you've spent time with it, adding your own creativity to these pages.

So thank you for coloring, for wondering, and for letting these Nobel Prizes in Chemistry spark your imagination. The story of science is never finished, and now you've become a small part of it too.