New Perspectives in Science Education
International Conference
NEW PERSPECTIVES in SCIENCE EDUCATION
5th Edition

Chemistry and Society: Peer-Review as Teaching and Evaluation Devices within a Multitude of Subjects

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Chemistry and food

Chemistry and medicine

Chemistry and energy

Chemistry in the boudoir

Forensic chemistry

Other technological and utility subjects

Chemistry explaining the world

Local and very specific subjects

General and historical subjects

Chemistry and war

Astronomy and spacial subjects

Weeks 1-2: Choosing the subject, learn how to find information, about journals, editors and authors, and how to write and revise an article

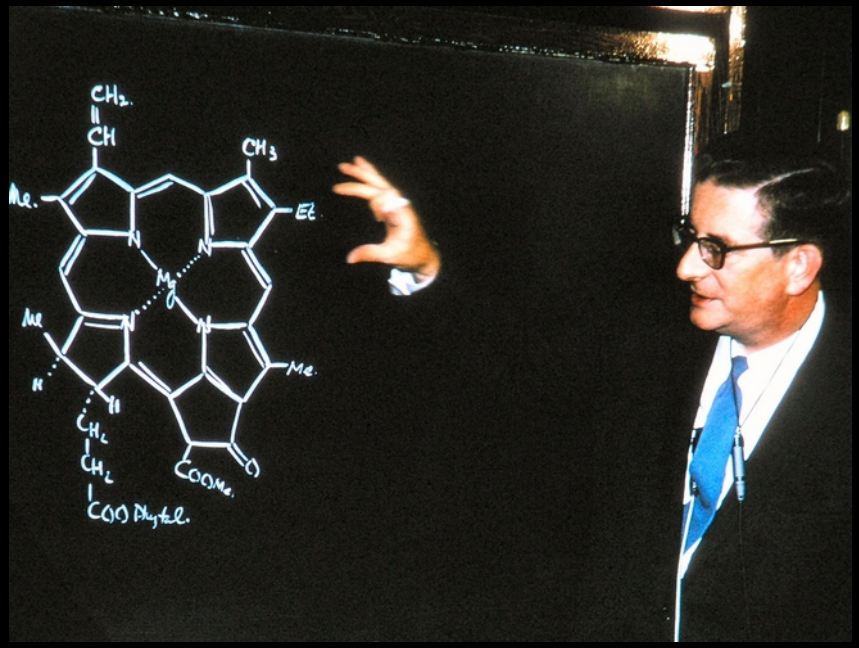
Weeks 3-8: Five minutes presentations (pitch) of the subjects plus ten minutes discussion

Weeks 9-12: Writing the revision articles based on the presentation and discussion

Week 13: Engage in the anonymous peer-review process

Week 14: Receive the anonymous revision of the written article

Week 15: Correct the article after the revision and responding to the reviewers through the “editor”



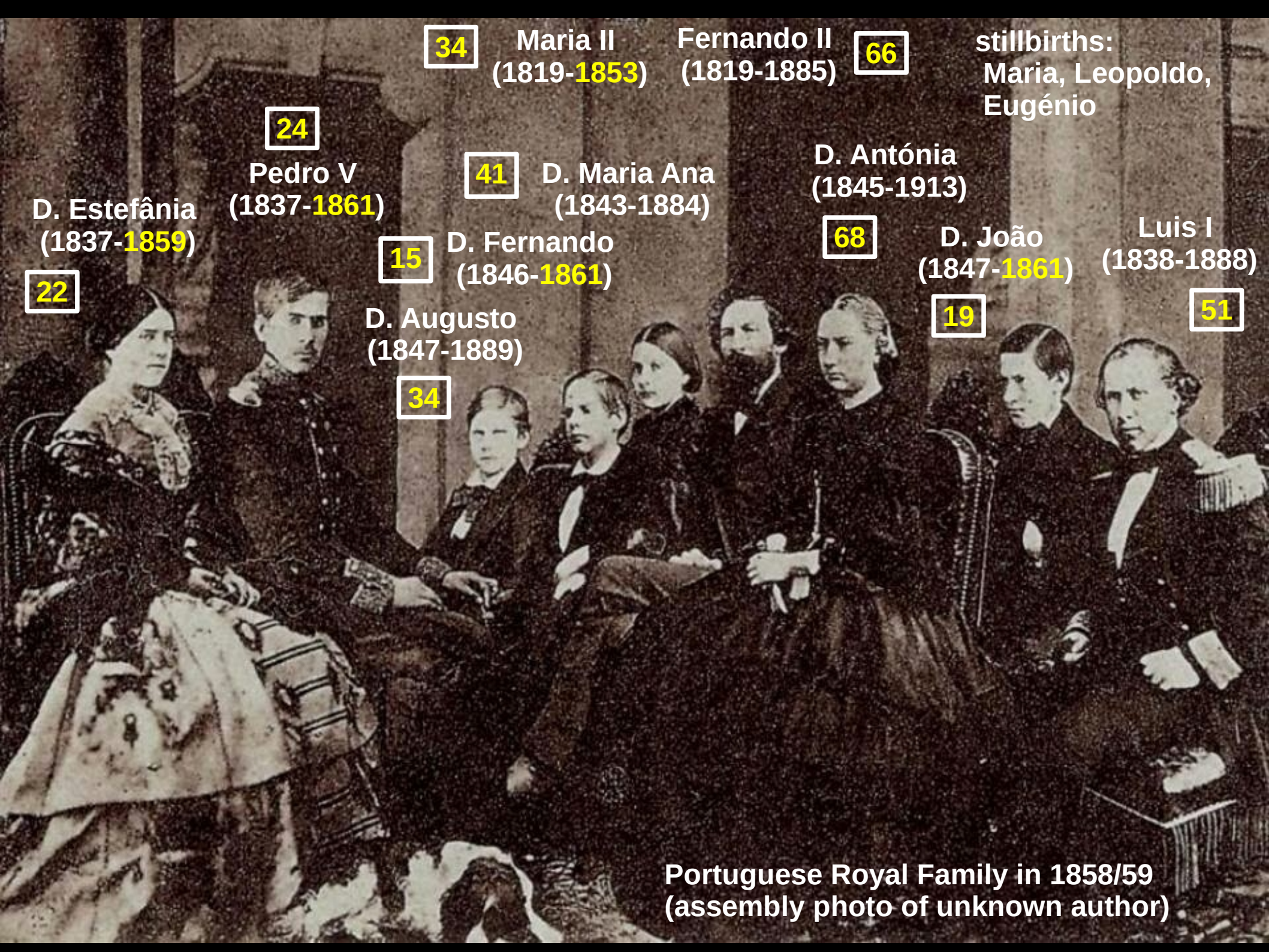
Robert B. Woodward (1917 – 1979)
Nobel 1965

Gertrude Elion (1918 – 1999)
Nobel, 1988

But if the two countries or governments are at war, the men of science are not. Humphry Day remark whem receiving a medal from Napoleon in 1807

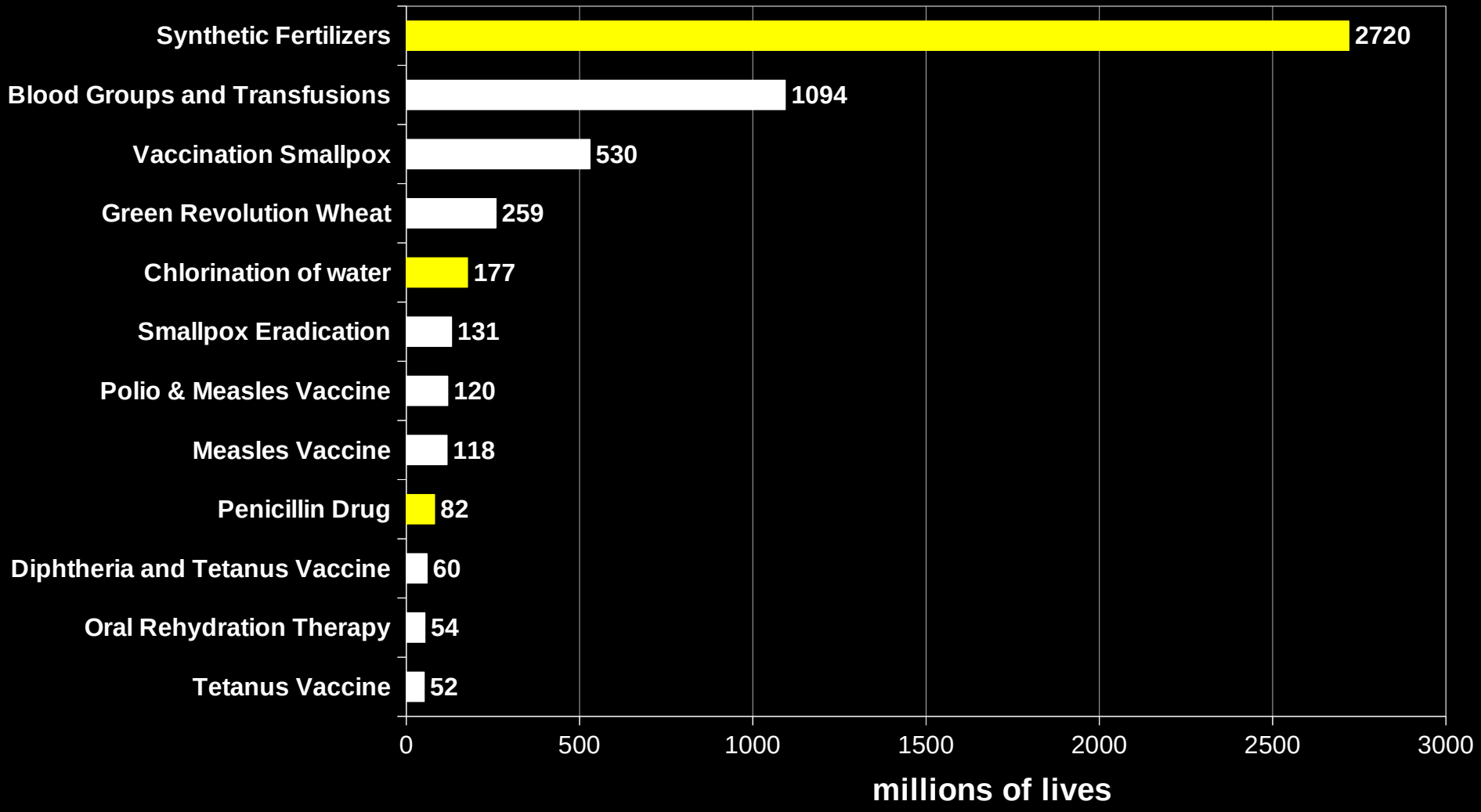
Polanyi (1962). *The republic of science. Its political and economic theory.*

Rodrigues (2019). What can Chemists and the Public Learn from Biographies of Chemists? in *Perspectives on Chemical Biography in the 21st Century*, Ed. Malaquias & Morris, Cambridge Scholars, pp.172-179.

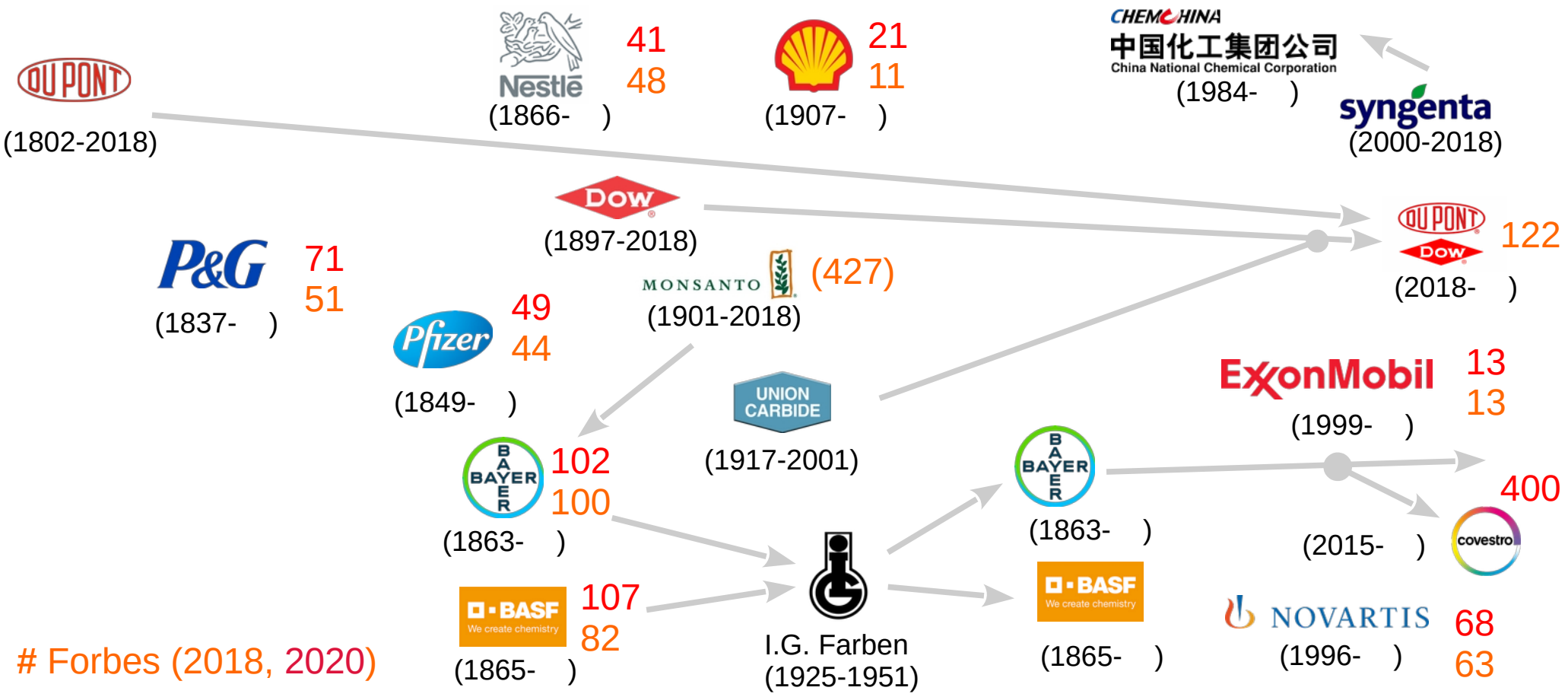


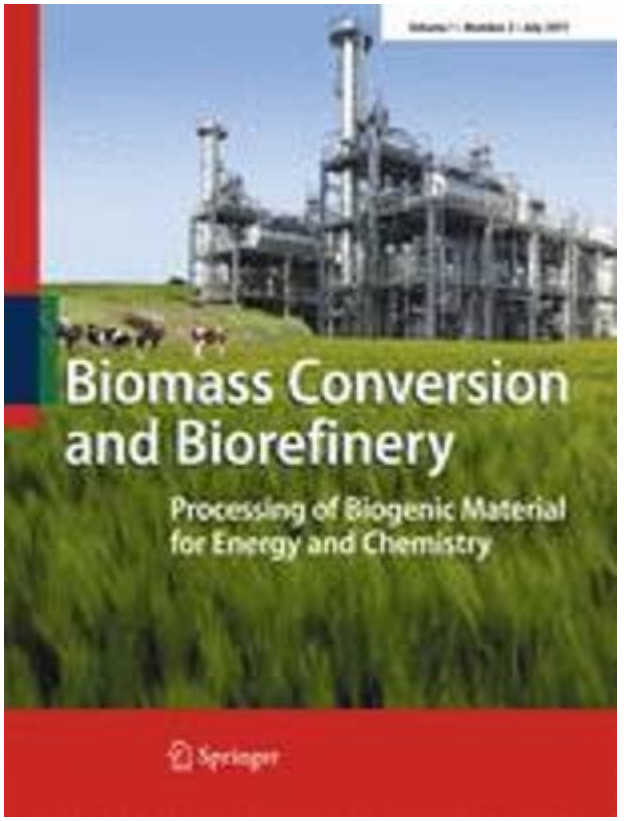
Portuguese Royal Family in 1858/59
(assembly photo of unknown author)

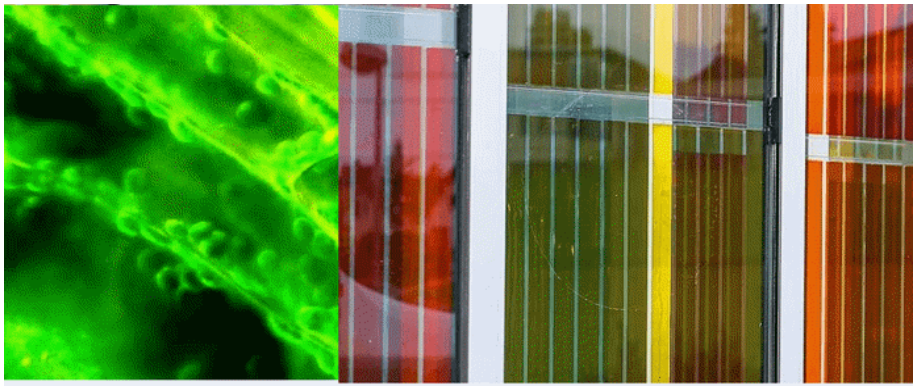
How many lives have been saved due to scientific discoveries?



(estimates form site ***Science Heroes,*** http://www.scienceheroes.com/)


DUPONT
(1802-2018)
Nestlé
41
48
(1866-)
21
11
(1907-)
CHEMCHINA
中国化工集团公司
China National Chemical Corporation
(1984-)
syngenta
(2000-2018)
DOW
(1897-2018)
DUPONT
DOW
122
(2018-)
P&G
71
51
(1837-)
MONSANTO
(427)
(1901-2018)
Pfizer
49
44
(1849-)
UNION CARBIDE
(1917-2001)
ExxonMobil
13
13
(1999-)
BAYER
102
100
(1863-)
BAYER
(1863-)
400
(2015-)
covestro
BASF
We create chemistry
107
82
(1865-)
I.G. Farben
(1925-1951)
BASF
We create chemistry
(1865-)
NOVARTIS
(1996-)
68
63
Forbes (2018, 2020)
1800
1850
1900
1950
2000
Perkin mauveine synthesis (1857)
World War I (1914-1918)
World War II (1939-1944)
FDA (1906, 1938, 1959-)
IUPAC (1919-)
Vietnam War (1955-1975)
Bhopal disaster (1984)
Silent Spring (1962)
Thalidomide tragedy (1957-1963)



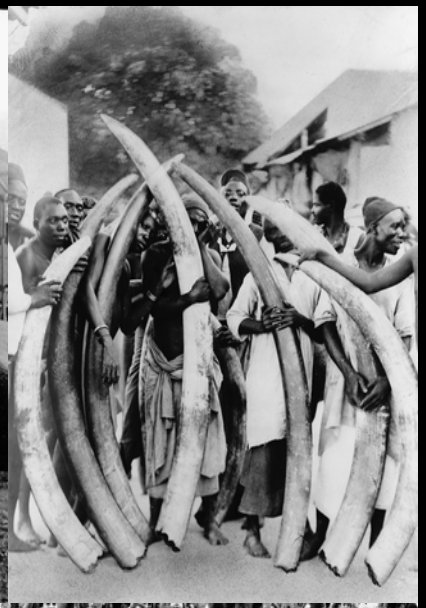


new solar cells and solar harvesting

new material for harsh environments

new bateries and supercapacitors

Chemistry saves the whales and the elephants!



More than three thousand million people saved by chemistry

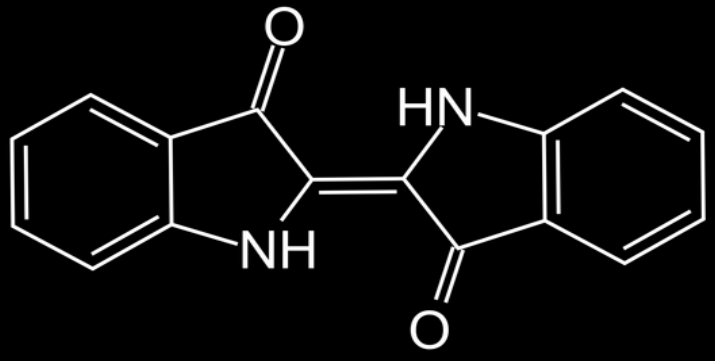
Dead whale With more than 40 kg plastic!

By 2050, plastic in the oceans will outweigh fish

More than 177 million of substances organic and inorganic

www.cas.org (2021, February)

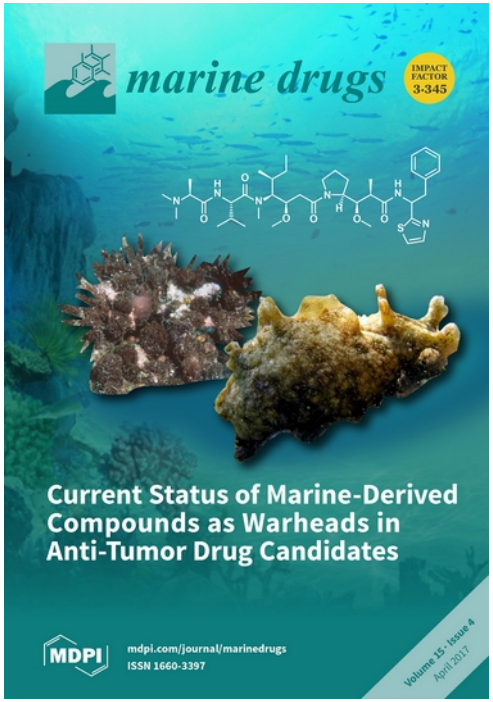
Indigo and Tyrian purple

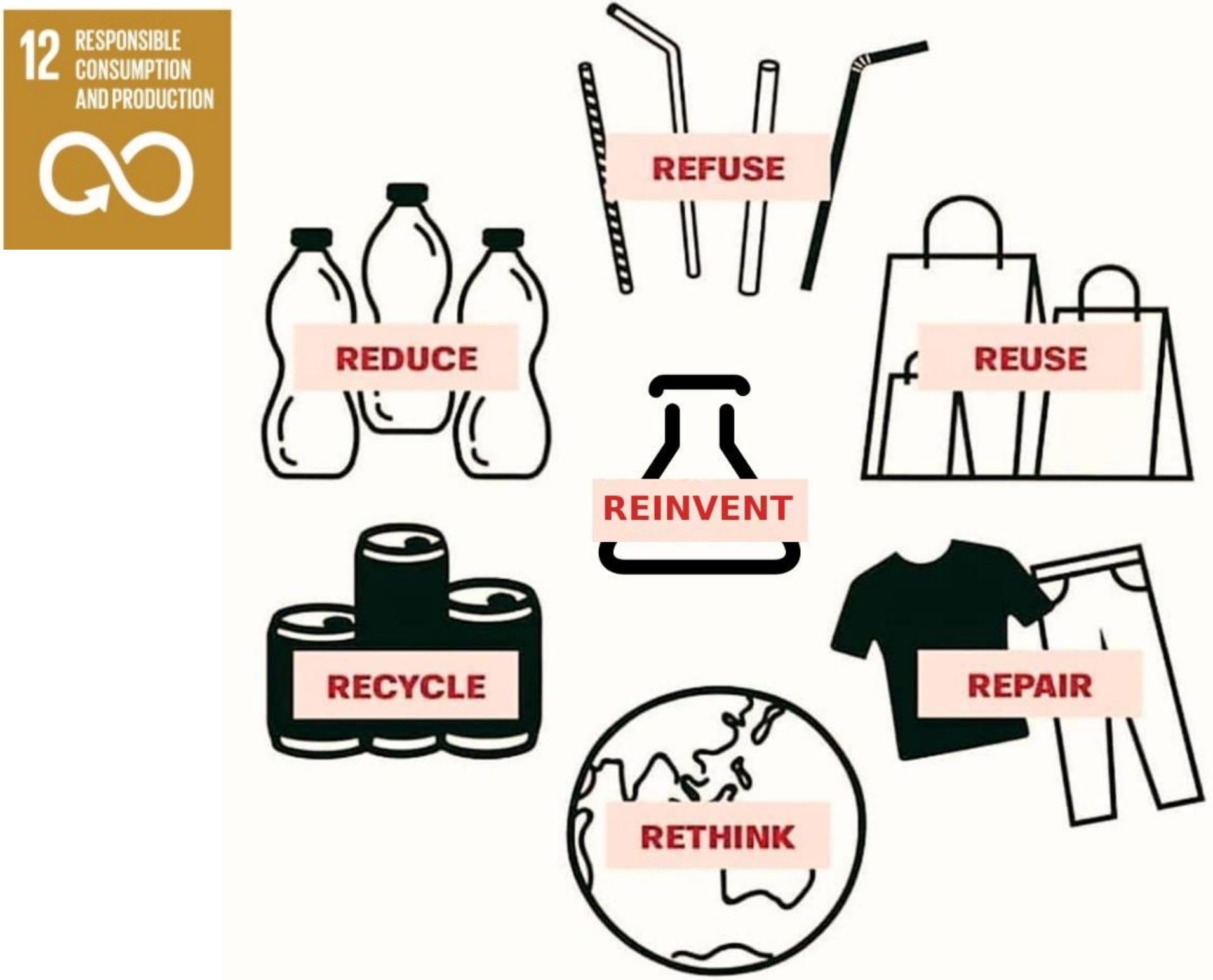


14 LIFE BELOW WATER

new materials for oil spillage

more sustainable fish farming




12 RESPONSIBLE CONSUMPTION AND PRODUCTION
REFUSE
REDUCE
REUSE
REINVENT
RECYCLE
REPAIR
RETHINK

Department of Chemistry, University of Coimbra
Chemistry and Medicinal Chemistry, 1st, 2nd, and 3rd cycle
Forensic Chemistry, 2nd cycle

Acknowledgments
Centro de Química de Coimbra
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