Date: February 16, 2026

RESUME

Full name: Zeev Gross

Date and place of birth: September 27, 1954, Afula - Israel.

Marital status (optional): Married + 4

Web site: http://schulich.technion.ac.il/Zeev_Gross.htm

ACADEMIC DEGREES

Ph.D.: 1987, Chemistry, Bar Ilan University, under Prof. S. Hoz: "Nucleophilic Attacks on Systems Having Low Lying LUMO's and their Reversals"
M.Sc.: 1982, Chemistry, Bar Ilan University
B.Sc.: 1979, Chemistry, Bar Ilan University

ACADEMIC APPOINTMENTS

10/2024-present: Professor Ameritus, Dept. of Chemistry, Technion
8/2013 and 8/2014: Moore Distinguished Scholar, California Institute of Technology
2/2004 – 10/2024: R.M. & R.D. Blum Professor, Dept. of Chemistry, Technion
7/2002-1/2004: Full Professor, Dept. of Chemistry, Technion
8/1999-6/2002: Associate Professor, Dept. of Chemistry, Technion
8/1995-7/1999: Senior Lecturer, Dept. of Chemistry, Technion
10/1990-7/1995: Lecturer, Dept. of Chemistry, Technion
6/1988-9/1990: Fulbright Postdoctoral Fellow, Dept. of Chemistry, Princeton University

PROFESSIONAL EXPERIENCE

3/2018-9/2018: Visiting Scientist (Sabbatical leave), City of Hope
3/2009-8/2009: Visiting Scientist (Sabbatical leave), California Institute of Technology
3/1999-6/1999: Visiting Scientist (Sabbatical leave), California Institute of Technology

TECHNION ACTIVITIES

- Member of the Senate committee for international awards, 1.2004 – 1.2005.
- Member of the Senate committee for academic promotion (all ranks, up to full Professor), 1.2004 – 31.12.2005
- Member of the Inter-Senate committee for Academic Freedom, 12.2004 – 2.2005 (resigned).
- Member of the Technion Senate, 1.1.2006 – 31.12.2010.
- Member of the Senate committee for the Harvey prize, 2006.
- Member of the Technion's steering committee, 1.1.2011-3.2011
- Deputy Vice President for academic affairs, 3.2011 – 10.2011
- Elected Member of the Technion Senate, 3.2013 – present.
- Member of the Technion's steering committee, 9.2014-12.2014 (resigned when appointed as dean)
- Member of the Senate committee for the Harvey prize, 2015 & 2017 (Chairman)
- Dean, Division of External & Continuing Studies, 1.2015-3.2018
- Dean, Division of External & Continuing Studies, (2nd term), 9.2018-7.2021
- Member of the Technion's steering committee, 6.2022-12.2025
- Advisory Board of the journal *Inorganic Chemistry*, 01.2025

PUBLIC PROFESSIONAL ACTIVITIES

- Organizing Committee of *The 9th International Symposium on Homogeneous Catalysis*, Jerusalem, Israel: August 21-26, 1994.
- Organizing Committee of *The 20th International Symposium on Macrocyclic Chemistry*, Jerusalem, Israel: July 2-7, 1995.
- Organizing Committee of *The Israel Chemical Society 62nd Annual Meeting*, The Technion, Haifa, Israel: February 1997.
- Guest Editor (together with H. B. Gray) of *The Journal of the Israel Chemical Society*, special issue devoted to Bioinorganic Chemistry, published in May, 2000.
- Organizing Committee of *The XIIth International Symposium on Supramolecular Chemistry (ISSC XII)*, Eilat-Israel: October 13-18, 2002.
- Editorial Board of the *Journal of Porphyrins and Phthalocyanines*, 1.2001 – 1.2005
- Editorial Board of the *Journal of Inorganic Biochemistry*, 1.2001 – 1.2005
- Advisory Committee Member of IUPAC (*International Union of Pure and Applied Chemistry*), chosen by the Israel Chemical Society: 1.2004 – 1.2010

- Organizing Committee of *The 38th International Conference on Coordination Chemistry (ICCC 38)*, Jerusalem-Israel: July 20-25, 2008.
- Organizer of the "Catalytic Processes" section for *The 5th International Conference on Porphyrins and Phthalocyanines*, Moscow-Russia, July 13-18, 2008.
- Organizer of the "Non-PDT Medicinal Chemistry" session for *The 7th International Conference on Porphyrins and Phthalocyanines*, Jeju-Korea, July 13-18, 2012.
- Organizing Committee of the *2nd EuCheMS Inorganic Chemistry Division Meeting*, Jerusalem-Israel: July 7-11, 2013.
- Organizer and Chairman of the COST meeting on "*Corroles and Porphyrins as lead structures for the design of efficient water splitting catalysts*", Technion, November 24 - 26, 2013.
- Organizer of the "Energy" session for *The 8th International Conference on Porphyrins and Phthalocyanines*, Istanbul-Turkey, June 22-27, 2014.
- Chairman of *Archimedes*, the integration of high school pupils into academic Chemistry studies at the Technion, 1.2012 – present.
- Chairman of the national Chemistry Olympiad, *Chimiada*, 1.2012 – present.
- Chairman of the national team for the *International Chemistry Olympiad*, 1.2012 – present.
- Organizer and Chairman of the Schulich Summer School on "*Science and Technology of Marcrocyclic Metal Complexes*", Technion, June 29 - July 1, 2014.
- Organizer and Chairman of the Schulich Winter School on "*Frontiers in Inorganic Chemistry*", honoring Prof. Harry B. Gray's 80th Birthday, Technion, December 1-3, 2015.
- Organizer of the "Photo- and Electro-Catalytic Processes" session for *The 9th International Conference on Porphyrins and Phthalocyanines*, Nanjing-China, July 3-8, 2016.
- Organizer of the "Photo- and Electro-Catalytic Processes" session for *The 10th International Conference on Porphyrins and Phthalocyanines*, Munich-Germany, July 1-6, 2018.

- Organizer and Chairman of the 1st Israel-Japan conference on *Catalysis for the Benefit of Society*, November 2-6, 2018, Technion.
- Organizer of the "Photo- and Electro-Catalytic Processes" session for *The 11th International Conference on Porphyrins and Phthalocyanines*, 2021 (virtual due to the pandemic).
- Organizer of the "Corroles (Synthesis, properties and applications)" session for *the 12th International Conference on Porphyrins and Phthalocyanines*, Madrid-Spain, July 10-15, 2022.
- Organizer of the "Multifunctional Tetrapyrrole-based Agents for Cancer-Imaging and Therapy" session for *the 13th International Conference on Porphyrins and Phthalocyanines*, Buffalo-USA, July 1-6, 2024.
- Organizer and Chairman of the 1st international conference on *Chemistry for a Sustainable Future*, May 9-11, 2023, Technion.
- Organizing Committee of the international conference on *Frontiers in Organic Synthesis and Catalysis*, celebrating Ilan Marek's 60th birthday, May 13-15, 2023, Technion.
- Organizer and Chairman of the 2nd international conference on *Chemistry for a Sustainable Future*, March 16-18, 2026, Technion.

MEMBERSHIP IN PROFESSIONAL SOCIETIES

The Israel Chemical Society
The Society of Porphyrins and Phthalocyanines
The Society of Bioinorganic Chemistry
The American Chemical Society
The European Academy of Sciences

FELLOWSHIPS, AWARDS and HONORS

(Year, honor – list prizes, awards, or important nominations)
Bar-Ilan interdisciplinary award for excellent M.Sc. candidates, 1981.
Landau prize for excellence (M.Sc. thesis), 1983.
Bar-Ilan scholarship for excellent starting doctoral students, 1984.
Bar-Ilan scholarship for excellence (Ph.D. students), 1985.
Pulver award for excellence (Ph.D. candidates), 1986.
Fulbright postdoctoral fellowship, 1988.
Koebner-Klein award for starting faculty members, 1991.

Henri Gutwirth award for excellence in research, 1995.

Ray and Miriam Klein award for "The development of porphyrin-like catalysts for asymmetric catalysis", 1999.

Mitchel award for the promotion of inventions with commercial potential, 4/2000.

Hershel Rich - Technion Innovation Award, 5/2000.

Henry Taub Prize for Excellence in Research – 5/2003.

The Reba May & Robert D. Blum Named Professorship ("Kathedra") – 2/2004.

Schulich Award for Excellence in teaching, 2009.

Hershel & Hilda Rich Innovation Award, 6/2013

Moore Distinguished Scholar, Caltech, 8/2013

Israel Chemical Society Award for the Outstanding Scientist, 2/2014

Xingda Lecture, Peking University, Beijing, 9/2014

Resnick Distinguished Lecture, California Institute of Technology, 9/2017

Mahler Lecture, Univ. of Texas at Austin, 4/2018

JSPS Invitational Fellowship for Research in Japan, 1/2018

Hans Fischer Career Award in Porphyrin Chemistry, 7/2018

KAIST Summer Lectureship Award, July 2022

Cooper Award for Excellence in Research, 2023

Member Elect, the European Academy of Sciences, 10/2023

Gold Medal, Israel Chemical Society, 4/2024

Rita Levi-Montalcini Prize, 6/2024

GRADUATE STUDENTS

Completed Theses

The primary supervisor is Zeev Gross in all cases. Additional supervisors are mentioned wherever relevant.

1. Claudia M. Barzilay, M.Sc., 12/93; "Preparation, Isolation and Characterization of Metalloporphyrins in Special Oxidation States."
2. Iris Toledano, M. Sc., 11/94; "Preparation of New Metalloporphyrins and Exploration of their Efficiency as Oxygenation Catalysts." (Wolf prize for excellent M. Sc. students, 1994)
3. Merav E. Tal, M.Sc., 1/95; "Preparation, Characterization and Reactivity of Oxometalloporphyrins." (Gutwirth award for excellent M. Sc. students, 1993)
4. Shay Nimri, M.Sc., 3/96; "Oxoiron(IV) Porphyrin Cation Radicals: The Effect of Axial Ligands on their Electronic Structure and Chemical Reactivity." (Gutwirth award for excellent M. Sc. students, 1995)

5. Lilia Kaustov; M.Sc., 11/96; "Manganese Porphyrin Catalyzed Halogenation of Hydrocarbons."

6. Liliya Simkhovich, M.Sc., 6/97; "Structure-Reactivity-Selectivity Relationships in Iron Porphyrin Catalyzed Oxygenation of Alkanes"

7. Claudia M. Barzilay, Ph.D., 6/98; "Less Common Oxidation States and Unique Metal-Ligand Interactions in Iron and Ruthenium Porphyrin Complexes." (Wolf prize for excellent Ph.D. students, 1996)

8. Santiago Ini, Ph.D., 3/00; "New Chiral Metalloporphyrins as Catalysts for Asymmetric Oxygenation of Hydrocarbons." (Wolf prize for excellent Ph.D. students, 1998; The Israel Chemical Society Award for best graduate students, 1999).

9. Atif Mahammed, Ph.D., 6/00; "Exploration of Osmium Porphyrin Chemistry." (Gutwirth award for excellent Ph.D. students, 1998).

10. Galina Golubkov, M.Sc., 3/01; "Corroles: Synthesis, Modification and Metal Complexes".

11. Liliya Simkhovich, Ph.D., 12/01; "Synthesis, Characterization, and Catalytic Apllications of Novel Porphyrins and Corroles and their Metal Complexes". (The Israel Chemical Society Award for best graduate students, 2001; Gutwirth award for excellent Ph.D. students, 2001).

12. Inna Luobeznova, M.Sc., 3/03; " Mono- and Dimetallic Metal Complexes of Corroles".

13. Merav Abdales, M.Sc., 10/04; “Interactions of Water-Soluble Corroles with Proteins”

14. Elena Tkachenko, Ph.D., 10/04; " Selective Functionalization of Corroles".

15. Galina Golubkov, Ph.D., 3/05- ; "Catalysis of Atom and Group Transfer by Metal Corroles".

16. Ruth Goldschmidt, M.Sc., 4/05; “New Corroles with Desirable Features for Light-driven Applications”

17. Marina Raizman, M.Sc., 8/05; “Molybdenum Corroles”

18. Iris Aviv, Ph.D., 4/07-; “Catalysis Based on Unique Chemistry of Metallocorroles”. (The Israel Chemical Society Award for best graduate students, 2007)

19. Adi Netzer, M.Sc., 4/07- ; “Bioconjugated Corroles”. (Sherman interdisciplinary Scholarship (2004); Gutwirth Scholarship (2005))

20. Zoya Gershman, M.Sc., 5/07; “Positively charged corroles”.

21. Inna Luobeznova, Ph.D., 6/07; “Activation of Small Molecules by Low Valent Corrole Metal Complexes”.

22. Katya Buchman; M.Sc., 6/07; “Oxygen Atom Transfer Catalysis by Manganese Corroles”.

23. Sharon Navon; M.Sc., 10/07; “Reactivity and Electronic Structures of Iron Corroles”.

24. Meital Eckshtain; M.Sc., 1/2009; “Corrole metal complexes as catalysts for decomposition of superoxide anion radical”

25. Oren Pniel; M.Sc., 1/2009; “Corroles as Chromophores in Dye Sensitized Solar Cells”

26. Shlomit Avidan; M.Sc., 9/2009; “Corroles as Catalysts for Decomposition of Reactive Oxygen and Nitrogen Species”

27. Izana Etinger; M.Sc., 3/2010; “Advanced Catalysis by New Corrole Metal Complexes” (Jacobs Scholarship, 2008-9).

28. Adi Haber, Ph.D. 11/2011; “Metallocorroles for Attenuation of Atherosclerosis” [Sherman interdisciplinary Scholarship (2004); Gutwirth Scholarship (2005); Sego prize (2006); Fine Scholarship (2007); Jacobs Scholarship (2009); Horev prize in medicnal chemistry (2011); Springer Thesis Prize for outstanding PhD research (2012)]. Additional supervisor: Michael Aviram, Faculty of Medicine.

29. Zoya Okun, Ph.D. 7/2012; “Metallocorroles for Therapeutic and Related Applications” (Faculty Excellence Scholarship, 2010, Sego prize, 2011, ICS excellence for graduate students, 2012).

30. Tal Kfir, M.Sc., 10/2014; “Effect of Metallocorroles on Cancer Development in Diabetics”

31. Matan Solliway, M.Sc. 2/2014; “Corroles, novel drugs for treatment of neurodegenerative diseases”

32. Lena Rabinovich, Ph.D., 2/2015; “Gold Corroles”

33. Izana Nigel-Etinger; Ph.D.,2015, “Early Transition Metal Corrole Complexes”

34. Sagi Sevilia, M.Sc., 4/2015; “New approaches for water oxidation”

35. Jenia Vestfrid, Ph.D. 8/2016; “Rational Design of Corroles with Superior Photophysical and Chemical Properties for a Variety of Applications” (Fein award, 2012)

36. Anh Le, M.Sc., 10.2017; “Molecularly Functionalized Hybrid Nanomaterials for Photocatalytic Water Splitting”

37. Lena Landau, M.Sc., 3/2018; “Metallocorroles as Catalysts for Energy Relevant Processes”

38. Matan Solliway, Ph.D., 3/2019; “Bioconjugated Corroles for Treating Diseases”

39. Vinay K. Sharma, M.Sc., 5/2019 “Corroles and metallocorroles for self-assembly and sonocatalysis”

40. Peter Teplitzki, M.Sc.,02/2020 “Prediction of the Chemical and Physical Properties of Corroles via DFT Computations”

41. Xuan Zhan, Ph.D., 09/2020; "Photophysics and Photochemistry of Trifluoromethylated Corroles and the Corresponding Metal Chelates"

42. Mahmoud Majdoub, M.Sc., 10/2021; “Minimally Substituted Corroles and Metallocorroles”

43. Qiucheng Chen, Ph.D., 12/2021; “New Corroles and Sapphyrins for Unique Structures and Novel Applications”

44. Chen Juhong, M.Sc., 12/2022; “Metallocorroles as Photoredox Catalysts for Organic Reactions”

45. Vinay K. Sharma, Ph.D. (co-supervisor: Yehuda Assaraf- Biology) 8 / 2023; “Stimuli Responsive Chromophores”

46. Arik Reslin, Ph.D., 04/2024; “Electrocatalytic processes by new types of metallocorroles”

47. Marcelo Fernandez-Dela-Mora, M.Sc., 09/2024; “Metal Complexes of Unsubstituted Corroles for Fundamental Studies”

48. Tomer Ianovici, M.Sc., 11/2024;” Photocatalysis for Halide to Halogen Conversion using Porphyrinoid Dimers and Monomers”

49. Sachin Kumar, Ph.D., 12/2025 “Metal Complexes of Minimally Substituted Corroles and Electrocatalysis Thereby”

Theses in Progress

50. Shachar Fite, "Developing Machine Learning Workflows for Utilization in Chemistry", Ph.D. candidate, 10.2019-

51. Azad Saini, “Corroles with Meso-C1 Substituents and Utilization of Corresponding Complexes for Various Applications”, Ph.D. candidate, 11.2022-

52. Marcelo Fernandez-Dela-Mora, “Uncovering the Electronic Structures of Metallocorroles by Experimental and Computational Methodologies, Ph.D. candidate, 10.2024 –

53. Anubhi Rawat, Newly Synthesized Corroles for Electrocatalysis”, Ph.D. candidate, 09.2024 –

54. Yuval Guetta, “Corrole based molecules for biomedical applications”, Ph.D. candidate, 10.2024 –

55. Shahar Tsur, “Designing Novel Corrole Derivatives for Diverse Applications”, M.Sc. candidate, 11.2024 –

Postdocs and Ph.D. Co-workers

Past

1. Dr. R. Puthisigamani Pandian, 12.95-4.96; "Metal Chelation by Dioxaporphyrins"

2. Dr. Nona Khaselev, 3.96-5.97; "Water-Soluble Porphyrins for Non-Radiative Therapy"

3. Dr. Irena Saltsman, 4.95- 3.99; "Core-Modified Porphyrins"

4. Dr. Nitsa Galili, 8.97-9.99; "Water-Soluble Porphyrins and Related Macrocycles for Non-Radiative Therapy"

5. Dr. Parameswar Iyer, 10.99-10.01; "Asymmetric Catalysis by Porphyrin and Corrole Metal Complexes"

6. Dr. Liliya Simkhovich, 12.02-10.04; "Asymmetric Catalysis by Corrole Metal Complexes"

7. Dr. Anil Kumar, 4/2009-9.2010; "Vanadium- and Manganese-oxo Corroles"

8. Dr. Pinky Singh, 4.2011-4.2012; "Electron-rich Corroles"

9. Dr. Nickolay Semenishyn, 9.2011-3.2013; "Lanthanide Corroles"

10. Dr. Ali Amona, 1.2011 – 4. 2013; "Bioinorganic Chemistry of Amphipolar Corroles"

11. Dr. Gargi Dutta, 4.2012 – 5.2013; "Catalysis by Mn corroles"

12. Dr. Adi Haber, 4.2012-12.2013; "Medicinal Chemistry of Corroles" (Hershel & Hilda Rich Innovation Award 2013)"

15. Dr. Tridib Goswami, 11.2013-3.2015; "Corrole-based anticancer agents"

16. Dr. Susovan Bhowmik, 6.2014-6.2016; "Supramolecular Metallocorroles"

17. Dr. Kolanu Sudhakar, 9.2015-6.2019; "Novel Photosensitizers"

18. Dr. Woormileela Sinha, 6. 2016-07.2020; "Superstructured Corroles for Catalysis"

19. Dr. Pinky Yadav, 3.2018-10.2020 ; "Metallocorroles as Reduction Catalysts"

20. Prof. Anil Kumar, 2.2020- 4.2021 (academic visitor, on sabbatical leave)

21. Dr. Amit Tyagi, 3.2020-10.2023; "Heterogenized Molecular Catalysts"

22. Dr. Soumita Dwari, 07.2022-03.2024; "Nucleophilic Reactions of Amines with the Trifluromethyl Group (–CF3) in 5,10,15-tris (trifluoromethyl) corrole (TFC)"

23. Dr. Sruti Mondal, 11.2022-11.2024; "Nickel corrole catalysts for hydrogen evolution reaction"

24. Dr. Lakshmi Goswami, 05.2024-04.2025; "Studies towards heavy atom substitution of TFC-Monoazaporphyrins"

<u>Presently</u>

1. Dr. Irena Saltsman, 4.2000 - ; "Synthesis of Novel Corroles for Applications in Catalysis"

2. Dr. Atif Mahammed, 7.2000- ; "Applications of Corrole Metal Complexes in Medicine and Energy Related Processes "

3. Dr. Amir Mizrahi, 7.2013 - ; "Small Molecule Activation by Metallocorroles"

4. Dr. Anu Jaangal, 03.2025- Post-functionalization of Corroles

RESEARCH GRANTS

1. *Synthesis of New Porphyrin Derivatives.*
Grantor: The National Center for "Absorption in Science", Ministry of Immigrant Absorption.*
Period: 4/1995 - 4/1998; INS 90,000
Intended to support Dr. Irena Saltsman

2. *Electronic Structure and Reactivities of Oxidized Metalloporphyrins.*
Grantor: The United States-Israel Binational Science Foundation.*
Period: 9/1995 - 9/1998; $ 112,000
Together with Prof. T. G. Spiro, Dept. of Chemistry, Princeton University, USA.

3. *New Approaches for the Preparation of Metalloporphyrins and for their Utilization.*
Grantor: The Israel Academy of Sciences and Humanities, Basic Research Foundation.
Period: 10/1995 - 10/1998; $ 140,000

4. *New Pharmaceutical Applications of Porphyrin Derivatives.*
Grantor: Prochon Biotech Co. Ltd.
Period: 2/1996 - 2/1998; $ 40,000.

5. *Porphyrins and Related Macrocycles as Growths Factor's Inhibitors.*
Grantor: Yeda Research and Development Co. Ltd.
Period: 2/1998 - 2/1999; $ 20,000.

6. *Novel Corroles and their Utilization in Medical Applications.*
Grantor: The National Center for "Absorption in Science", Ministry of Immigrant Absorption.*
Period: 4/2000 - 3/2002 INS 140,000
Intended to support Dr. Irena Saltsman

7. *A New System to Synthesize Corroles - Potential Porphyrin Substitutes with Superior Implications in Medicine and Catalysis*
Grantor: The Mitchel Innovation Fund
Period: 6/2000 - 5/2001; $ 20,000.

8. *Novel Catalysts for Aerobic Oxygenation and Asymmetric Synthesis*
Grantor: The Israel Science Foundation (Grant No. 368/00).
Period: 10/2000 - 9/2004; $ 271,350.

9. *Catalysis by Novel Metal Corrole Complexes*
Grantor: The Petroleum Research Foundation (PRF), USA.
Period: 4/2001 - 9/2003; $ 60,000.

10. *Equipment Fund for a 500 MHz NMR*
Grantor: The Israel Academy of Science*
Period: 10/2001 $ 400,000.
Together with Prof. T. Baasov and I. Marek

11. *Targeted Drug Delivery by a Combination of Engineered Adenoviruses and Corroles*
Grantor: The STAR Foundation (Chicago)
Period: 10/2002 - 9/2004 $ 70,000.

12. *Asymmetric Catalysis*
Grantor: German-Israeli Project Cooperation (DIP)*
Period: 1/2004 - 12/2008 EURO 201,600 (for ZG).
Together with Prof. E. Keinan and I. Marek (Technion) and W. Thiel (Mülheim, Germany)

13. *Asymmetric Catalysis by Corrole Metal Complexes*
Grantor: The Israel Science Foundation
Period: 10/2004 - 9/2007 $ 150,000.

14. *Corrole-based Photovoltaic Cells*
Grantor: The United States-Israel Binational Science Foundation.*
Period: 10/2005 - 9/2009 $ 128,000.
Together with Prof. H.B. Gray (Caltech-Pasadena, USA)

15. Time-Resolved EPR Spectroscopy of Photoexcited Metallocorroles and Porphyrin-Based Rotaxanes. A New Arena of Porphyrinoids
Grantor: The Israel Science Foundation. *
Period: 10/2006 - 9/2009 $ 36,000 (for ZG).
PI: Haim Levanon (HUJ), CI: Zeev Gross

16. *Transferrin-conjugated Corroles for treating disadvantageous cell proliferation*
Grantor: The Gurwin Foundation
Period: 1/2007-1/2008 $ 100,000

17. *Equipment Fund for a 600 MHz NMR*
Grantor: The Israel Academy of Science (Converging Technologies)*
Period: 10/2007 NIS 2,902,500 (~ $ 725,000).
Together with Prof. T. Baasov and M. Gandelman

18. *Metallocorroles for protection of lipoproteins from modifications that might lead to atherosclerosis*
Grantor: The Israel Science Foundation
Period: 10/2008-9/2012 NIS 1,064,000 (~ $ 320,000).

19. *Light-driven electron and energy transfer in metallocorrole complexes: A combined femtosecond visible/IR and nanosecond EPR investigation*
Grantor: Deutsche Forschunggemeinschaft (DFG).*
Period: 10/2008 - 4/2011 EUR 112,380 (for ZG).
Together with Prof. H. Levanon (Hebrew Univ.) and Prof. K. Heyne (Freie Universitat Berlin)

20. *Phosphorescent Corroles*
Grantor: The United States-Israel Binational Science Foundation.*
Period: 10/2009 - 9/2013 $ 120,000.
Together with Prof. H.B. Gray (Caltech-Pasadena, USA)

21. *From pure chemistry to preclinical studies: Atherosclerosis and Cancer*
Grantor: The Herbert Irving Cancer and Atherosclerosis Research Fund
Period: 10/2009 - 9/2010 $ 51,369.

22. *Metallocorroles for Treatment of Central Nervous System Diseases*
Grantor: Johnson & Johnson
Period: 6/2011 - 6/2012 $ 50,000.

23. *Combating Cardiovascular Diseases by Metallocorroles*
Grantor: Kamin program, by the ministry of trading
Period: 12/2011 - 11/2012 NIS 394,400 (~ $ 100,000).

24. *Tunable Chromophores for Dye Sensitized Solar Cells*
Grantor: Nevet grant - GTEP - RBNI
Period: 9/2011 - 9/2012 $ 30,000.

25. *Combating Cardiovascular Diseases by Metallocorroles*
Grantor: Kamin program, by the ministry of trading, 2nd year
Period: 12/2012 - 11/2013 NIS 400,000 (~ $ 100,000).

26. *Integrated System for Solar Production of Hydrogen and its Transformation into Liquid Fuel*

Grantor: GTEP
Period: 2/2013-1/2014, $ 50,000
Co-PI: Avner Rothschild.

27. *Advanced Catalysis by Corrole Metal Complexes*
Grantor: The Israel Science Foundation
Period: 10/2013-9/2017 NIS 1,000,000 (~ $ 280,000).

28. *Combating Cardiovascular Diseases by Metallocorroles*
Grantor: Kamin program, by the ministry of trading, 3rd year
Period: 12/2013 - 11/2014 NIS 400,000 (~ $ 100,000).

29. *Non-platinum catalysts for oxygen reduction reaction at fuel cell cathodes*
Grantor: Manlam Fund
Period: 7/2014 –3/2015 $ 15,000

30. *Expanded and Contracted Porphyrins for Stabilization and Activation of Metal Ions in High Oxidation States*
Grantor: The Pazy foundation
Period: 1/2015 –12/2018 NIS 438,000 for ZG)
Co-PI: Magal Saphier, Kamag

31. *Agents for Treating Delayed Effects of Acute Radiation Syndrome*
Grantor: Robert Shillman Fund for Global Security Technion North-Easton Partnership (Manlam)
Period: 3/2015 –2/2016 $ 25,000

32. *Integrated Organic, Electrochemical and Cellular Approach for Studying the Inhibition of Deubiquitinases by Reactive Oxygen Species*
Grantor*:* Ministry of Science, Technology and Space (MOST)
Period: 15/12/2015 -14/12/2018 NIS 560,000 (for ZG)
Co-PI's: Ashraf Brik (Technion) and Doron Shabbat (TAU).

33. *First row transition metal complexes as catalysts for fuel cells*
Grantor: Ministry of Infrastructure, Energy, and Water
Period: 1/2016 – 12/2018 NIS 380,000 (for ZG)
Co-PI: Lior Elbaz, Bar Ilan University

34. *Member of the National Research Center for Electrochemical Propulsion, INREP 2*
Grantor: ISF-ICORE
Period: 1/2017 – 12/2022 NIS 1,000,000 (for ZG)
Multiple Co-PI's: 9 from Bar Ilan University, 5 from the Technion, 5 from Tel Aviv University, 1 from Ariel University, 1 from the Weizmann institute.

35. *Metallocorroles for imaging and therapy in malignant melanoma*
Grantor: the Jacki and Bruce Barron Cancer Research Scholars' Program, a partnership between ICRF and City of Hope
Period: 9/2017 – 8/2018 $ 75,000 (for ZG)
Co-PI: John Termini, City of Hope.

36. *Theranostic metallodrugs for imaging and fighting cancer,* Funding of a 6 months sabbatical at the City of Hope
Grantor: the Jacki and Bruce Barron Cancer Research Scholars' Program, a partnership between ICRF and City of Hope
Period: 3/2018 – 8/2018 $ 60,000
Hosting scientist: John Termini, City of Hope.

37. *Inorganic Catalysis for Solving Global Challenging Problems"*
Grantor: The Israel Science Foundation
Period: 10/2017-9/2021 NIS 1,200,000 (~ $ 330,000)

38. "*Earth abundant metal complexes with unique and tunable photophysical properties*"
Grantor: Joint NSFC-ISF Research Grant.
Period: 10/2017-9/2020. NIS 310,000/y for 3 years.
1 time grant for equipment: NIS 180,000
Co-PI: Prof. Zhao Jianzhang, Dalian University of Technology.
Grant Number: 2535/17

39. *Photo- and Electro-Catalysis by Novel Macrocycle Chelates for Energy Relevant Processes*
Grantor: The Pazy foundation
Period: 10/2018 –9/2022 NIS 600,000 for ZG)
Co-PI: Magal Saphier, Kamag

40. *Corrole Nanoconjugates for Cancer Imaging and Therapy*
Grantor: Kamin program, by the ministry of trading, 1st year
Period: 9/2018 - 9/2019 NIS 440,000 (~ $ 122,000).

41. *Corroles and Subphthalocyanines for Organic Photovoltaics (OPVs)*
Grantor: Lyon Sachs Foundation
Period: 9/2017 - 8/2019 $ 300,000.

42. *Treating Delayed Effects of Acute Radiation Syndrome*
Grantor: Technion Fund for National Security
Period: 4/2019 - 3/2020 NIS 90,000.

43. *Corrole Nanoconjugates for Cancer Imaging and Therapy*
Grantor: Kamin program, by the ministry of trading, 2nd year
Period: 9/2019 - 8/2020 NIS 440,000.

44. *Photocatalysis by Mono- and Bimetalllic Complexes*
Grantor: The Ministry of Science, Technology and Space
Period: 12/2020- 11/2023 NIS 400,000.
Together with Sankar Prasad Rath, IIT Kanpur

45. "*Chemistry for a Sustainable Future*"
Grantor: ISF Grant for organizing an international conference.
Period: 2021 – 2023 NIS 70,000.

46. *Design of unique molecular catalysts that absorb efficiently onto porous carbon and serve as heterogenous catalysts for oxygen reduction and hydrogen production*
Grantor: The Ministry of Energy and Water Infrastructure
Period: 3/2022- 2/2025 NIS 675,000.

47. "*Minimally Substituted Corroles*"
Grantor: ISF Research Grant.
Period: 10/2022-9/2025. NIS 900,000.
& 1 time grant for travel to California: NIS 38,000
Grant Number: 1286/22

48. *" Novel Compounds for Treating the Delayed Effects of Acute Radiation Syndrome*"
Grantor: The Pazy foundation
Period: 10/2022 –9/2026 NIS 871,000 for ZG
Co-PI: Israel Zilbermann, Kamag

49. *" Electrodes Modified by Sustainable Molecular Catalysts for Selective CO_2 Reduction*"
Grantor: Ministry of Innovation, Science & Technology
Period: 12/2022 –11/2025 NIS 749,999

50. *" Sustainable Approaches for Hydrogen Economy*"

Grantor: Ministry of Energy, “seed” money for collaboration with Morocco to 15 research groups from Israel
Period: 3/2023 –2/2026 NIS 210,000 (for ZG)

51. *“Quantum Level Investigations of Corroles for Revealing Their Most Fundamental Properties Needed for Advancing Their Technological Utility”*
Grantor: Helen Diller Quantum Center
Period: 9/2023 –11/2024 $ 40,000

52. “*Chemistry for a Sustainable Future*”
Grantor: ISF Grant for organizing an international conference.
Period: 7/2/2024 –7/2/2025 NIS 70,000.

53. “Hydrogen Technologies Consortium (H2Tech)”
Grantor: VATAT.
Period: 7/2/2024 –7/2/2028 NIS 1,620,000.

PENDING

“EU-corroles” with 6 partners
Grantor : MARIE Skłodowska-CURIE ACTIONS, Doctoral Networks (DN)
Call: HORIZON-MSCA-2025-DN-01-01
Submission Date: 26.11.2025

“Science and Technology of Minimally Substituted Corrole Metal Complexes”
Grantor: ISF
Submission date: 12/11/2025

"Copper Corroles for Radioprotection”,
Grantor: Pazy Foundation, together with NRCN
Submission date: 18/02/2026

“Assembly of Bimetallic Cu Molecular Qubits and the Influence of Entanglement on Spin Relaxation”
Grantor : Resnick-Caltech-Technion Collaborative Program
Submission Date: 27/01/2026

“Detection and Treatment of Potential Threats Polluted Water by Chemical Sensors and Photocatalysts - PROTECT”,
Grantor: NATO, with Roberto Paolesse from Italy
Submission date: 30/01/2026

“Electrosynthesis as a Green Methodology for the Preparation of Materials for Green Hydrogen Production”,
Grantor: MOST, with Claude Gros from France
Submission date: 15/03/2026

SIGNIFICANT PROFESSIONAL PROJECTS

09.2014 - present: Dexcel (**רוקחים מצויינות**)- exposure of high school students to advanced chemistry studies through an experimental learning approach.

1.2012 - present: Organizer & head of the **youth outreach activities** listed below:

Archimedes: The integration of high school pupils in Academic Chemistry studies

Chemiada: The national competition in Chemistry for high school pupils.

International Olympiad in Chemistry (IChO)

Head of the national team to the) that took place in:
Washington DC-USA (July 21-30, 2012)
Moscow-Russia (July 15-23, 2013)
Hanoi-Vietnam (July 20-29, 2014)
Baku-Azerbaijan (July 20-29, 2015)
Tbilisi-Georgia (July 23-August 1, 2016)
Bangkok-Thailand (July 6-15, 2017)
Bratislava-Slovakia and Prague-Czech Republic (July 19-29, 2018).
Paris-France (July 21-30, 2019)
Istanbul-Turkey (online event, July 23-29, 2020)
Kansai-Japan (online event, July 25-August 2, 2021)
Tianjin-China (online event, July 8-18, 2022)
Zurich-Switzerland (July 16-25, 2023)
Dubai- United Arab Emirates (July 5-14, 2025)

Mendeleyev Olympiad in Chemistry (which Israel joined since 2016

Head of the national team to the), that took place in:
Moscow-Russia, 2016
Astana-Kazakhstan, 2017
Minsk-Belarus, 2018
Saint Petersburg-Russia, 2019
Turkey (online event), 2020
Budapest-Hungary (online event), 2021
Tashkent, Uzbekistan, 2022
Astana-Kazakhstan, April 30-May 7, 2023
Shenzen-China, April 21- 27, 2024
Belo Horizonte, Brazil, May 5-13, 2024

PUBLICATIONS

Original Articles

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as a Source of Zero-order Reactions." *J. Chem. Soc., Perkin Trans. 2* **1985**, 1143 - 1146.

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8. J. T. Groves, Z. Gross and M. K. Stern; "Preparation and Reactivity of Oxoiron(IV) Porphyrins." *Inorg. Chem.* **1994**, *33*, 5065 - 5072.

9. Z. Gross and I. Toledano; "Preparation of Bis-Pocket Porphyrins with Carboxylic Acid Synthons." *J. Org. Chem.* **1994**, *59*, 8312-5.

10. C. M. Barzilay, S. A. Sibilia, T. G. Spiro, and Z. Gross; "Elucidation of Factors Affecting the Electronic Structures of Magnesium(II) and Zinc(II) Tetraarylporphyrin Cation Radicals" *Chem. Eur. J.* **1995**, *1*, 312-321.

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13. Z. Gross and S. Nimri; "Seeing the Long Sought Intermediate in the Reaction of Oxoiron(IV) Porphyrin Cation Radicals with Olefins" *J. Am. Chem. Soc.* **1995**, *117*, 8021-2.

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15. K. Czarnecki, S. Nimri, Z. Gross, L. M. Proniewicz, and J. R. Kincaid; "Direct Resonance Raman Evidence for a Trans Influence on the Ferryl Fragment in Models of Compound I Intermediates of Heme Enzymes" *J. Am. Chem. Soc.* **1996**, *118*, 2929-35.

16. Z. Gross, S. Ini, M. Kapon, and S. Cohen; "First Utilization of a Homochiral Ruthenium Porphyrin as Enantioselective Epoxidation Catalyst" *Tetrahedron Lett.* **1996**, *37*, 7325-8.

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29. A. Mahammed, G. Golubkov, L. Simkhovich, and Z. Gross; *Pacifichem 2005 (Symposium Title: Dioxygen Activation Chemistry of Metalloenzymes and Models)*, Honolulu, Hawai, USA, December 15-20, 2005,."Oxygen Atom Transfer Catalysis by Manganese and Chromium Corroles"

30. Z. Gross; *The Israel Chemical Society 71th Annual Meeting*, Tel Aviv, Israel: 15-16 February, 2006. "Catalytic NH Activation by Corrole Metal Complexes."

31. Z. Gross; The *4th International Conference on Porphyrins and Phthalocyanines*, Rome, Italy: 2-7 July 2006."How do the readily oxidized corroles stabilize high valent metals?"

32. Z. Gross and A. Mahammed; *232nd National Meeting of the American Chemical Society*, San Francisco, California-USA, September 10 –14, 2006. "Corrole Metal Complexes as very Efficient Catalysts for Decomposition of Reactive Oxygen Species"

33. Z. Gross and A. Mahammed; *9th International Symposium on Applied Bioinorganic Chemistry (ISABC9)*, Napoli-Italy, December 2 –5, 2006. "Safe and fast catalytic decomposition of reactive oxygen species by corrole metal complexes"

34. Z. Gross, A. Mahammed, A. Haber, and Z. Gershman; *1st International Symposium on Applied Bioinorganic Chemistry (ISABC9)*, Parry Sound, Ontario-Canada, May 22 –25, 2007. "Safe and fast catalytic decomposition of reactive oxygen and nitrogen species by corrole metal complexes"

35. A. Mahammed, I. Aviv, A. Haber, and Z. Gross; *90th Canadian Chemistry Conference*, Winnipeg, Manitoba-Canada, May 26 –30, 2007. "The potency of corrole metal complexes in catalysis, medicine, and photovoltaic cells"

36. A. Mahammed, A. Haber, and Z. Gross; *9th FIGIPAS Meeting in Inorganic Chemistry*, Vienna-Austria, July 4-7, 2007. "Combating reactive oxygen species by corrole metal complexes"

37. Z. Gross; The 213th Electrochemical Society Meeting (ECS), Phoenix, AZ, May 18-22, 2008. "Tuning Redox Potentials of Corrole Metal Complexes and their Catalytic Activity Regarding Decomposition of Reactive Oxygen Species"

38. Z. Gross; The *5th International Conference on Porphyrins and Phthalocyanines*, Moscow-Russia, July 13-18, 2008. "Advances in Corrole-based Applications"

39. Z. Gross; *3rd Joint International Symposium on Macrocyclic & Supramolecular Chemistry (ISMSC-III)*, Las Vegas, Nevada (USA), July 13-18, 2008. "Corrole Metal Complexes in Catalysis, Medicine, and Photovoltaic Cells"

40. Z. Gross; *The Israel Chemical Society 74th Annual Meeting*, Tel Aviv, Israel: 8-9 February, 2009. "Novel Catalysts for Decomposition of Reactive Oxygen and Nitrogen Species: From Fundamental Chemistry to Preclinical Investigations." (**Plenary Lecture**)

41. Z. Gross; *The 215th Electrochemical Society Metting (ECS)*, San Francisco, CA, May 24-29, 2009. " Iridium(III) Corroles: From Fundamental Investigations of their Chemical and Physical Properties to their Utilization in Advanced Applications"

42. Z. Gross; *2nd Georgian Bay International Conference on Bioinorganic Chemistry*, Parry Sound, Ontario-Canada, May 26 –29, 2009. "Preclinical Investigations of Corrole Metal Complexes"

43. Z. Gross; *International Conference on Polymers and Advanced Materials POLYMAT-2009*, November 22-26, 2009, Huatulco, Mexico."Covalent versus non-covalent approaches for asymmetric catalysis by corrole metal complexes"

44. Z. Gross; *The 217th Electrochemical Society Metting (ECS)*, Vancouver, Canada, April 25-30, 2010." Catalytic Decomposition of Reactive Oxygen and Nitrogen Species by Corrole metal complexes"

45. Z Gross; The *6th International Conference on Porphyrins and Phthalocyanines*, New Mexico-USA, July 4-9, 2010. "Corroles: The Journey from Synthesis, Coordination Chemistry, Photophysics, and Catalysis to Medicinal Applications" (**Plenary Lecture**).

46. Z. Gross; *Gordon Research Conference on "Tetrapyrroles, Chemistry & Biology Of"*, Salve Regina University, Newport, RI (USA), July 25-30, 2010.

"Metallocorroles for cellular and whole animal imaging and as therapeutic molecules".

47. Z. Gross; The Tetrapyrrole Discussion Group Meeting, Berlin-Germany, September 13-14, 2010. "Serum distribution, cellular and organ imaging, and therapeutic utility of metallocorroles"

48. Z. Gross; *5th Asian Biological Inorganic Chemistry Conference*, Kaohsiung, Taiwan, November 2-5, 2010. "Imaging organ and cellular uptake of metallocorroles used for tumor elimination and for attenuation of atherosclerosis, diabetes, and neurodegenerative diseases"

49. Z. Gross; *The Israel Chemical Society 76th Annual Meeting*, Tel Aviv, Israel: 9-10 February, 2011. "Redox active metallocorroles for catalytic decomposition of cytotoxic oxygen and nitrogen species"

50. A. Mahammed, I. Saltsman, A. Haber, Z. Okun, and Z. Gross; *The 217th Electrochemical Society Metting (ECS)*, Montreal, Canada, May 1-6, 2011. "Catalytic Decomposition of Reactive Oxygen and Nitrogen Species by Corrole metal complexes"

51. Z. Gross; *3rd Georgian Bay International Conference on Bioinorganic Chemistry*, Parry Sound, Canada, May 31-June 4, 2011. "Metallocorroles: Preclinical Investigations on Cancer, Atherosclerosis, and Neurodegenerative Diseases"

52. Z. Gross; *3rd Asian Conference on Coordination Chemistry (ACCC-3)*, New Delhi, India October 17-20, 2011. "Utilizing Photophysical and Catalytic Properties of Metallocorroles for Medicinal Applications" (**Keynote Lecture**)

53. Z. Gross; *Science for Future Molecular Systems*, Fukuoka-Japan, November 25-26 2011. "Tuning the Photophysical and Catalytic Properties of Metallocorroles for Medicinal Applications" **(Foreign Speaker**).

54. Z. Gross; *The Israel Chemical Society 77th Annual Meeting*, Ramat Gan, Israel: February 7-8, 2012. "Redox active metallocorroles for catalytic decomposition of cytotoxic oxygen and nitrogen species" (**Keynote Lecture**)

55. Z Gross; The *7th International Conference on Porphyrins and Phthalocyanines*, Jeju-S. Korea, July 1-6, 2012. "Peroxidase & Catalase Activities of Bioconjugated Metallocorroles"

56. Z Gross; The *4th Congress of the European Association for Chemical and Molecular Sciences (EuCheMS)*, Prague, Czech Republic: August 26-30 2012. "Controlling and utilizing the catalytic pro- and anti-oxidant properties of corrole metal complexes" (**Keynote Lecture**, in the Symposium on New Trends in Organometallics)

57. Z Gross; The *10th International Symposium on the Activation of Dioxygen & Homogeneous Catalytic Oxidation (ADHOC-2012)*, Ramat Rachel, Israel, September 2-7, 2012. "Controlling and utilizing the catalytic pro- and anti-oxidant properties of corrole metal complexes" (**Keynote Lecture**)

58. Z. Gross; *6th Asian Biological Inorganic Chemistry Conference*, Hong Kong, China, November 5-8, 2012. "Catalytic Antioxidants for treatment of Diseases and their complications" (**Keynote Lecture**)

59. Z. Gross; *Gordon Research Conference on "Inorganic Reaction Mechanisms"*, Galveston, Texas-USA, March 3-8, 2013. "From Small Molecule Deactivation to Medicinal Chemistry"

60. Z. Gross, A. Haber, A. Abu-Younis Ali, and A. Mahammed; *2nd EuCheMS Inorganic Chemistry Division Meeting*, Jerusalem, July 7-11, 2013. Cholesterol-Lowering by Metallocorrole/Statin Combination Therapy" (**Keynote Lecture**)

61. Z. Gross*; The Israel Chemical Society 79th Annual Meeting*, Tel Aviv, Israel: February 7-8, 2014 "Corroles: From Fundamental Science to Drug Candidates and Water Splitting Catalysts" (**Plenary Award Lecture**)

62. Z. Gross, *European Symposium on Current Challenges in Supramolecular Artificial Photosynthesis* " Jena, March 12-13, 2014. "Corroles: From Fundamental Science towards Water Splitting Catalysts"

63. A. Mahammed, B. Mondal, A. Rana, A. Dey, and Z. Gross; *The 225th Electrochemical Society Meeting (ECS)*, Orlando, Florida-USA, May 11-15 2014, "Cobalt Corrole Catalyzed Hydrogen Evolution Reaction: Surprising Electronic Effects and Characterization of Key Reaction Intermediates"

64. Z. Gross; *14th International Conference on Oxidative Stress Reduction, Redox States & Antioxidants*, Paris-France, June 12-13 2014, "Catalytic Antioxidant Therapy and Beyond: Recent Advances by Macrocyclic Metal Complexes"

65. Z. Gross; *NYU-Technion Retreat*, NYU Langone Medical Center, NY-USA, Sept. 3-4, 2014. "Metallocorroles for combating cancer and metabolic syndromes"

66. Z. Gross: *1st Sino-Israel Bilateral Workshop & International Symposium on Organometallics and Homogeneous Catalysis*, Beijing - China, September 7-9, 2014. "Catalytic Activation of Small Molecules/Ions by Corrole Metal Complexes"

67. Z. Gross: ***Xingda Lecture*** *at Peking University*, Beijing - China, September 19, 2015. "Metallocorroles as Catalysts for Health and Energy Related Processes"

68. Z. Gross; *5th Georgian Bay International Conference on Bioinorganic Chemistry*, Parry Sound, Canada, May 19-23 2015. "Catalytic Antioxidant Therapy by Metallodrugs: Lessons from Metallocorroles"

69. Z. Gross and A. Mahammed; *The 227th Electrochemical Society Meeting (ECS)*, Chicago-USA, May 24-28 2015, "New Catalysts for the Hydrogen and Oxygen Evolution Reactions"

70. Z. Gross; *3rd EuCheMS Inorganic Chemistry Division Meeting*, Wrocław, Poland, June 28 - July 1, 2015. "Redox Active Metallodrugs: Benefits and Concerns" (**Plenary Lecture**)

71. Z. Gross; *The Israel Chemical Society 81st Annual Meeting*, Tel Aviv, Israel: February 9-10, 2016 "Sustainable Metal Catalyst for Energy-Relevant Processes" (**Keynote Lecture**)

72. Z. Gross; *251st ACS National Meeting & Exposition*, San Diego, California-USA March 13-17, 2016 "Bioconjugated metallocorroles, for medicine and catalysis"

73. Z. Gross; *COST Meeting*, Tarragona-Spain: April 13-5, 2016 "Catalysts for proton reduction and photocatalysis"

74. Z. Gross; *The 9th International Conference on Porphyrins and Phthalocyanines*, Nanjing-China, July 3-8, 2016, "*Tumor detection and elimination by targeted corrole metal complexes*"

75. Z. Gross; *COST Meeting*, Milazzo-Italy: September 4-6, 2016 "*Outline of all the electro- and photocatalytic reactions developed during the duration of the COST action, with first row transition metal corroles*"

76. Z. Gross; *Athens International Catalysis Symposium*, Athens-Greece, November 3-4 2016 "1st Row Metallocorroles for Electro- and Photo-catalysis" (**Keynote Lecture**).

77. Z. Gross; *Frontiers of Molecular Design: Synthesis and Catalysis*, Technion-Israel, November 15-16 2016 "1st Row Metallocorroles for Electro- and Photo-catalysis".

78. Z. Gross; 5th Symposium on the Advances in Bioinorganic Chemistry, Kolkata-India: January 7-11 2017 "*Tumor detection & elimination by targeted corrole metal complexes*" (**Keynote Lecture**).

79. Z. Gross; 5th Symposium on the Advances in Bioinorganic Chemistry, Kolkata-India: January 7-11, 2017 "*Recruiting the Reducing Power of Metallocorroles for Catalyzing Energy Relevant Processes*".

80. Z. Gross; *6th Georgian Bay International Conference on Bioinorganic Chemistry*, Parry Sound, Canada, May 23-27, 2017. "Design and Synthesis of Metallocorroles for Catalyzing Energy Relevant Processes"

81. Z. Gross; *The 231th Electrochemical Society Meeting (ECS),* New Orleans-USA, May 28- June 22, 2017. "Earth Abundant Metal Corroles as Catalysts for Energy Relevant Processes"

82. A. Mahammed and Z. Gross; *22nd International Symposium on Photochemistry of Coordination Compounds*, Oxford-UK, July 9-14, "Metallocorroles for Photocatalysis" (presented by A. Mahammed)

83. Zeev Gross; *Modern Trends in Inorganic Chemistry (MTIC)- XVII*, Pune-India, December 11-14, 2017. "Hypothesis-Driven Design of Corrole Metal Complexes as Catalysts for Energy Relevant Processes" (**Plenary Lecture**).

84. Zeev Gross; *Conference on new advances in the chemistry of porphyrinoids*, Warsaw-Poland, June 29-30, 2018, "Cobalt Corroles for Catalyzing Energy Relevant Processes"

85. Zeev Gross; *The 10th International Conference on Porphyrins and Phthalocyanines*, Munich-Germany, July 1-6, 2018 "20 Years of Triarylcorroles and New Horizons" (**Career Award Lecture**)

86. Zeev Gross; *13th International Symposium on Macrocyclic and Supramolecular Chemistry (ISMSC-13)*, July 8-13, 2018, Quebec City, Canada "Tuning the Photophysical and Chemical Properties of Metallocorroles"

87. Zeev Gross; *The 10th International Conference on Porphyrins and Phthalocyanines*, Rochester NY, USA, July 1-6, 2018 "20 Years of Triarylcorroles and New Horizons"

88. Zeev Gross; *The 11th International Conference on Porphyrins and Phthalocyanines*, Virtual, June 28 - July 3, 2021 *"The Smaller the Better? Synthesis and Properties of Minimally Substituted Corroles"*

89. Z. Gross; *Pacifichem 2021 (Symposium Title: A Creative Vision for the Future)*, Honolulu, Hawai, USA, December 16-21, 2021,."Oxygen Atom Transfer Catalysis by Manganese and Chromium Corroles"

90. Z. Gross; Prof. *Lechosław Latos-Grażyński's 70th Birthday Symposium,* Wroclaw-Poland**,** September 17-18, 2021, *"The Journey Towards Less Substituted Corroles and Sapphirine"*

91. Zeev Gross; Fifth Edition of Catalysis and Chemical Engineering, San Francisco-USA, February 22-24, 2021, *"From Homogenous to Heterogenous Energy-Relevant Electrocatalysis by Substituent-Free N4 Macrocyclic Metal Complexes"*

92. Zeev Gross; Vancouver-Canada May 29 – June 2, 2022, 241st ECS Meeting, *"Electronic and Size Effects, in Electrocatalysis by Minimally Substituted Corrole Metal Complexes"*

93. Zeev Gross; Anticancer Metal Drugs New Developments and Future Perspective, Jerusalem-Israel June 12, 2022, *"Doubly Stimulated Corrole for Organelle-Selective Anti-Tumor Cytotoxicity"*

94. Zeev Gross; Madrid-Spain July 10 – 15, 2022, ICPP-12 Conference Symposium, *"Corrole Metal Complexes as Catalysts for Clean Energy Processes"*

95. Zeev Gross; Marrakesh-Morocco March 14 – 17, 2023, 1st Bi-National Energy Initiative Workshop, *"Design of New N4 Macrocycles for Efficient Electrocatalysis"*

96. Zeev Gross; Boston-USA May 28-June 2, 2023, 243rd ECS Meeting *with the 18th International Symposium on Solid Oxide Fuel Cells (SOFC-XVIII), "Beneficial Changes in the Mechanism of the Cobalt Catalyzed Hydrogen Evolution Reaction, Induced by Corrole Chelation"*

97. Zeev Gross; Ioannina-Greece June 11 – 14, 2023, 16th ISABC,*"Internal and external stimuli for inducing selective anti-tumor cytotoxicity by corroles"* (**Keynote Lecture**).

98. Zeev Gross; Paris-France October 23 – 25, 2023, 3rd International Conference on Carbon Chemistry and Materials,*"Milestones and Recent Advances in the Science and Technology of Corroles"* (**Plenary Lecture**).

99. Zeev Gross; San Francisco-California May 26 – 30, 2024, 245th meeting of The Electrochemical Society (ECS),*"Size and Electronic Effects on Redox Potentials and Electrocatalytic Processes Performed by Corrole-Chelated Metal Complexes"*.

100. Zeev Gross; Costa Rica July 23 – 26, 2024, International Chemistry Congress on Chemistry: a solution for global changes, *"Catalyst Modified Carbon Electrodes for Renewable Energy Relevant Processes"* (**Plenary Lecture**).

101. Zeev Gross; Colorado, USA July 28 – August 3, 2024, the 45th International Conference on Coordination Chemistry (45th ICCC), *"Corroles: from Triplet Photosensitizers to Photoredox catalysis" (***KEYNOTE)**

102. Zeev Gross; Guilin, China December 1 – 6, 2024, the 11th Asian Biological Inorganic Chemistry Conference (AsBIC11), *"Photo, Electro, Photoredox, and Bio-Catalysis by Corrole Metal Complexes"*

103. Zeev Gross; Berlin, Germany March 27 – 28, 2025, the 6th International Summit on Catalysis & Chemical Engineering, *"Milestones & Recent Advances in Catalysis by Corrole Metal Complexes"*

104. Zeev Gross; Montreal, Canada May 18 – 22, 2025, the 247th meeting of The Electrochemical Society (ECS), *" Multiple Advantages of 3rd Generation Corrole Metal Complexes for Homogenous and Heterogeneous Electrocatalysis"*

105. Zeev Gross; Ontario, Canada May 20 – 24, 2025, The 2025 Georgian Bay International Conference on Bioinorganic Chemistry (CanBIC), *"Phosphorous corroles as platform for selective association to cancer cells and organelles"*

106. Zeev Gross; Xi'an, China October 23 – 26, 2025, the 3rd Asian Conference on Porphyrins, Phthalocyanines, and Related Materials (ACPP-3)*, "Catalysis by Corrole Metal Complexes for Drug Discovery and Clean Energy"*

107. Zeev Gross; Honolulu, Hawaii December 15 – 20, 2025, The International Chemical Congress of Pacific Basin Societies 2025 *(Pacifichem), "Mechanism of action-based approaches for increasing the efficacy of electrocatalytic hydrogen production" and " The importance of coordination chemistry for proper design of anti-cancer agents"*

Contributed Lectures

108. E. Keinan, E. Benory, B. S. Green and Z. Gross; The Israel Chemical Society 57th Annual Meeting, Technion, Haifa, February 12-13, 1992. "Anti-Metalloporphyrin Antibodies as Hemoprotein Analogs."

109. Z. Gross and S. Nimri; 9th International Symposium on Homogeneous Catalysis, Jerusalem, Israel, August 1994. "Mimicking the Axial Ligand Effect on the Oxygenation Reactivity of Hemoproteins by Model Compounds."

110. Z. Gross and S. Nimri; The Israel Chemical Society 61st Annual Meeting, The Hebrew University, Jerusalem, February 1996. "Reaction Profile of the Last Step in Epoxidation of Olefins by Model Complexes of Cytochrome P-450."

111. S. Nimri, L. Simkhovich and Z. Gross; 6th International Symposium on the Activation of Dioxygen and Homogeneous Catalytic Oxidation, Noordwijkerhout, The Netherlands, April 14-19, 1996. "Ozone as Primary Oxidant in Iron(III) Porphyrin Catalyzed Hydroxylation of Hydrocarbons."

112. S. Ini and Z. Gross; 3rd European Conference on Bioinorganic Chemistry (EUROBIC 3), Noordwijkerhout, The Netherlands, August 4-10, 1996. "Novel Metal and Solvent Effects on Catalytic Oxidation of Hydrocarbons by Chiral Metalloporphyrins." (Lecture presented by graduate student S. Ini)

113. Z. Gross, C. M. Barzilay, A. Mahammed; 31st International Conference on Coordination Chemistry (ICCC-31), Vancouver, Canada, August 18-23 1996. "Novel Tri- and Tetravalent Ruthenium and Osmium Porphyrin Complexes and Mechanism of their Formation from the Metal(II) Carbonyls"

114. Z. Gross and S. Ini; XIIth FECHEM Conference on Organometallic Chemistry, Prague, Czech Republic, August 31-September 5, 1997. "Novel Effects of Metal, Solvent, and Oxidant on Metalloporphyrin Catalyzed Epoxidation of Olefins."

115. Z. Gross and S. Ini; 11th International Symposium on Homogeneous Catalysis, St. Andrews, Scotland, July 12-17, 1998. "Ruthenium Porphyrin Catalyzed Enantioselective Epoxidation of Olefins by Pyridine N-oxides."

116. Z. Gross and A. Mahammed; 227th National Meeting of the American Chemical Society, Anaheim, California-USA, March 28 – April 1, 2004. "Enzyme-like catalysis by bioconjugated corrole metal complexes."

117. Z. Gross; 14th International Symposium on Homogeneous Catalysis (ISHC-14), Munich, July 5 - 9, 2004. "Asymmetric Catalysis by Corrole Metal Complexes and their Non-covalent Conjugates with Proteins"

118. Z. Gross; 36th International Conference on Coordination Chemistry (ICCC-36), Merida, Mexico, July 18-23 2004. "Albumin Conjugated Corroles: Extremely Simple, yet very Efficient Biomimetic Catalysts for Asymmetric Oxidations"

119. A. Mahammed, G. Golubkov, and Z. Gross; 9th International SymposiumActivation of Dioxygen and Homogeneous Catalytic Oxidation, Cologne, GermanyJuly 25-29, 2005. "Stoichiometric, Catalytic, and Enantioselective Oxygen Atom Transfer Reactions by Manganese Corroles"

120. G. Golubkov, A. Mahammed, L. Simkhovich, and Z. Gross; Pacifichem 2005 (Symposium Title: Atom Transfer, Small Molecule Activation, and Metal-ligand Multiple Bonds), Honolulu, Hawai, USA, December 15-20, 2005, "Nitrogen Atom Transfer Reactions between Isolated (Nitrido)metal Complexes"

121. Z. Gross and A. Mahammed; 37th International Conference of Coordination Chemistry (ICCC-37), Cape Town, South Africa, August 13-18, 2006 "Amphiphilic Corrole Metal Complexes are very Efficient Catalysts for Selective Decomposition of Reactive Oxygen Species"

122. A. Haber, M. Aviram, and Z. Gross; 10th European Conference on Bioinorganic Chemistry (EUROBIC 10), Thessaloniki, Greece, June 22-26, 2010. "Corrole-conjugated HDL particles are resistant to function damaging oxidative stress." Lecture presented by graduate student Adi Haber.

123. Z. Gross; Medicinal Redox Inorganic Chemistry, Erlangen—Germany, July 20-22 2013. "*Corrole Metal Complexes: From pure science to preclinical investigations*"

124. Z. Gross and A. Mahammed; *The 227th Electrochemical Society Meeting (ECS)*, Chicago-USA, May 24-28 2015, "Electro- and Photo-Catalytic Reduction of Small Molecules/Ions by Corrole Metal Complexes".

125. Z. Gross; 3rd European Colloquium on Inorganic Reaction Mechanisms (*ECIRM)*, Krakow-Poland, June 21-26, 2016 "Tuning the Properties of 1st Row Metallocorroles for Electro- and Photo-catalysis"