



THE NATURE OF WATER

March 6th, 7th, 2023

UC Berkeley, MLK Jr. Building
West Pauley Ballroom, 2nd Floor
2495 Bancroft Way, Berkeley, CA 94720

SYMPOSIUM CHAIRS

PROF. OMAR YAGHI

James and Neeltje Tretter Professor of Chemistry,
UC Berkeley

PROF. BENGT NORDEN

Molecular Frontiers Foundation,
chair, Royal Swedish Academy of Sciences

PROF. DOUGLAS CLARK

Dean of the College of Chemistry, UC Berkeley

PROF. PEIDONG YANG

Prof. of Chemistry at the College of Chemistry, UC Berkeley

DR. LORIE KARNATH

Molecular Frontiers Foundation, Next Breath, President

06 Molecules in Action

8:30AM – 5:00PM

- 8:30AM–9:00AM Registration
- 9:00AM–9:15AM Opening address
- 9:15AM–12:45PM Presentations & Panel
- 12:45PM–1:45PM Lunch
- 1:45PM–5:00PM Presentations & Panel

07 Water is where life happens

9:00AM – 5:15PM

- 9:00AM–9:15AM Welcome
- 10:00AM–11:45AM Presentations
- 11:45AM–12:45PM Lunch
- 12:45PM–5:00PM Presentations & Panel
- 5:00PM–5:15PM Conclusion
- & take aways





THE NATURE OF WATER

DAY 1 – Molecules in Action

8:30AM-9:00AM REGISTRATION

9:00AM-9:15AM OPENING ADDRESS & WELCOME: PROF. DOUGLAS CLARK, DEAN OF THE COLLEGE OF CHEMISTRY, UNIVERSITY OF CALIFORNIA, BERKELEY

9:15AM-10:00AM PROF. RICHARD J. SAYKALLY: PROBING COMPLEX AQUEOUS INTERFACES. ENDOWED PROFESSOR OF CHEMISTRY, UNIVERSITY OF CALIFORNIA, BERKELEY

10:00-10:45AM PROF. ARIEH WARSHEL THE ROLE OF WATER IN BIOLOGICAL SYSTEMS. DISTINGUISHED PROFESSOR OF CHEMISTRY, UNIVERSITY OF SOUTHERN CALIFORNIA, FELLOW OF THE NATIONAL ACADEMY OF SCIENCES, NOBEL PRIZE IN CHEMISTRY

10:45AM-11:00AM BREAK

11:00AM-11:45AM PROF. RICHARD ZARE: WATER MICRODROPLET CHEMISTRY. MARGUERITE BLAKE WILBUR PROFESSOR IN NATURAL SCIENCE, PROFESSOR OF CHEMISTRY, STANFORD UNIVERSITY

11:45AM-12:45PM PANEL DISCUSSION

12:45PM-1:45PM LUNCH

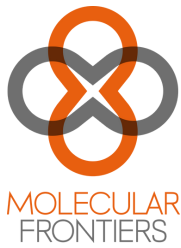
1:45PM-2:30PM PROF. PERNILLA WITTUNG-STAFSHED: PROTEIN FOLDING IN WATER IS BASIS OF LIFE AND DEATH. CHALMERS UNIVERSITY OF TECHNOLOGY, DEPARTMENT OF LIFE SCIENCES, GOTHENBURG, SWEDEN.

2:30PM-3:15PM PROF. FRANCES H. ARNOLD: ENZYMES DO IT IN WATER. LINUS PAULING PROFESSOR OF CHEMICAL ENGINEERING, BIOENGINEERING AND BIOCHEMISTRY AT THE CALIFORNIA INSTITUTE OF TECHNOLOGY. NOBEL PRIZE IN CHEMISTRY.

3:15PM-4:00PM PROF. HARRY GRAY: DYNAMICS OF UNSTRUCTURED PARKINSONS AND COVID PROTEINS IN WATER. ARNOLD O. BECKMAN PROFESSOR OF CHEMISTRY, CALIFORNIA INSTITUTE OF TECHNOLOGY

4:00PM-5:00PM PANEL DISCUSSION





THE NATURE OF WATER

DAY 2 – Water is where life happens

9:00AM-9:15AM WELCOME - PROF. BENGT NORDEN: THE ROLE OF WATER FOR LIFE. DEPARTMENT OF CHEMISTRY AND CHEMICAL ENGINEERING CHALMERS UNIVERSITY OF TECHNOLOGY GOTHENBURG, SWEDEN.

9:15AM-10:00AM PROF. ANDREW FIRE: INVESTIGATING BIOLOGICAL DIVERSITY AT THE SMALLEST SCALE. PROFESSOR OF PATHOLOGY AND OF GENETICS, STANFORD UNIVERSITY SCHOOL OF MEDICINE. NOBEL PRIZE IN PHYSIOLOGY OR MEDICINE.

10:00AM-10:45AM DR. PETER G. BREWER: HYDROGEN BONDS AND MICROBIAL SWIMMING - AND SPERM TOO. MONTEREY BAY AQUARIUM RESEARCH INSTITUTE

10:45AM-11:00AM BREAK

11:00AM-11:45AM PROF. DAVID SEDLAK: ADVENTURES IN WATER DECONTAMINATION. PLATO MALOZEMOFF PROFESSOR, DEPARTMENT OF CIVIL & ENVIRONMENTAL ENGINEERING, UNIVERSITY OF CALIFORNIA, BERKELEY

11:45AM-12:45PM PANEL DISCUSSION

12:45PM-1:45PM LUNCH

1:45PM-2:30PM DR. JESSICA V. FAYNE: SURFACE WATER FROM SPACE: MAPPING CHANGING WATER LEVELS USING NEW RADAR SATELLITES. JOINTLY APPOINTED LSA COLLEGIATE AND PRESIDENTS POSTDOCTORAL FELLOW OF THE UNIVERSITY OF MICHIGAN DEPARTMENT OF EARTH AND ENVIRONMENTAL SCIENCES

2:30PM-3:15PM CYNTHIA KOENIG: WELLO: A NOVEL APPROACH TO THE GLOBAL WATER CRISIS. FOUNDER, WELLO WATER

3:15PM-4:00PM PROF. OMAR YAGHI: SHAPING WATER BEHAVIOR IN WATER HARVESTING FROM AIR. JAMES AND NEELTJE TRETTER PROFESSOR OF CHEMISTRY, UNIVERSITY OF CALIFORNIA, BERKELEY

4:00PM-5:00PM PANEL DISCUSSION

5:00PM CONCLUSION AND CLOSURE

THANK YOU!

