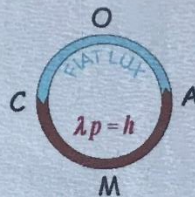


Quantum Systems in Chemistry and Physics (QSCP)

Centre de Mécanique Ondulatoire Appliquée

QSCP Senior Scientist Medal of CMOA

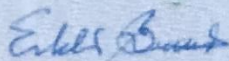


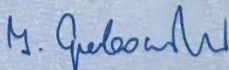
"Science sans conscience n'est que ruine de l'âme" (Rabelais)

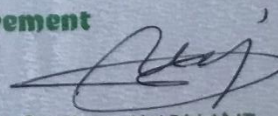
This is to certify that, on the 23rd day of June 2022,
at the QSCP-XXVJ International Workshop held at
Nicolaus Copernicus University, Toruń, Poland,
The Senior Medal of CMOA was awarded to

Sabre KAIS

for outstanding scientific and human achievement


Pr. Erkki J. BRÄNDAS
Chairman of the Jury
(Uppsala University, Sweden)


Pr. Ireneusz GRABOWSKI
Nicolaus Copernicus University
(Toruń, Poland)


Pr. Jean MARUANI
President of CMOA
(CNRS & Sorbonne, Paris, France)

Late Honorary President: Pr. Emer. Raymond DAUDEL, Founder President of the European Academy

On behalf of the International Scientific and Honorary Committees of the *Twenty-fifth International Workshop on Quantum Systems in Chemistry, Physics and Biology* and in the name of *Centre de Mécanique Ondulatoire Appliquée*, in front of this distinguished assembly of your peers gathered tonight, on the 23rd day of June 2022 in *Artus Court*, Torun, Poland, I have the privilege, the honour and the pleasure:

To award you the CMOA Senior Medal for outstanding scientific achievements in the fields of theoretical chemical physics and physical chemistry.

This award will add to the many awards and distinctions you have already received, especially *the Fakash and Landau Prizes from the Hebrew University of Jerusalem and the Herbert Newby McCoy Award from Purdue University*.

It is a privilege indeed to award you this *CMOA Senior Medal* for distinguished world scientists.

Professor Sabre Kais, thank you for participating in this ceremony, and congratulations for your nomination.

CMOA Senior Medal Presentation A

Professor Sabre Kais has made important and creative contributions in molecular quantum theory and in quantum computing, including the development of a finite-size scaling approach for assessing the stability of atomic and molecular systems and novel quantum computing algorithms for solving complex chemical problems. His pioneering contributions involve using quantum information science to resolve complex chemical problems and establishing an analogy between the symmetry breaking of electronic structure configurations and quantum phase transitions. He has advanced quantum entanglement as a measure of electron-electron correlation and developed a hybrid quantum algorithm with potential for future larger-scale quantum machine learning. Through his ground-breaking initiatives he has created a unique platform for quantum information and computation as a research leader and educator.