

84th IUVSTA Workshop:
Surface Micro-Spectroscopy and Spectro-Microscopy of
Electrical Phenomena: Advanced Methodologies for
Nano-Characterization of Electronic Surface Phenomena

2-5 September, 2018, Weizmann Institute of Science, Rehovot ISRAEL

The goal of this focused workshop was to bring together top researchers investigating electrical phenomena at interfaces, with emphasis on techniques combining high spatial and spectral resolution. Advanced experimental approaches were presented, along with theoretical lectures, thus forming a strong theme for discussions. Sixty attendees representing ten different countries participated. The presentations were almost evenly split between invited talks, contributed talks, and posters. The conference was structured to encourage deep discussions through interactions within and outside the lecture hall.

The concept of interfaces played a central role in several varied aspects: the boundaries spatially separating two entities; the interface between theory and experiment; the interface between spectroscopy and microscopy as two different experimental approaches; and the interplay between electrical and other physical properties. In each of those categories, new features potentially arise, unique to the meeting point between the conceptually pristine fields and, to a large extent, these features were at the focus of the workshop.

Examples included in-depth consideration of both internal molecular electronic characteristics and communication between molecules and the surroundings, including the influence of a well-controlled probe, whether it be photon, STM tip, or energetic electron beam with the studied system. Several works demonstrated exotic characteristics by activating neatly selected transport channels in low-dimensional systems. Others presented the development of novel measuring tools, in which fundamental physical effects were exploited to gain sensitivity and resolution. State-of-the-art spectro-microscopy in bright photon sources and/or phase-shaped beams in electron microscopes was also introduced, along with novel aspects of the near-field electrodynamics, photovoltaics, dissipation mechanisms and subtle influence of controlled strain on electronic behavior. Stimulating discussions inside and outside of the lecture hall gained significantly from the interdisciplinary profile of the audience. Thus, many participants - both veteran and younger - commented on how much they had learned during the week.

Sessions began Sunday morning and ran through the day (with brief tour of Weizmann campus during the lunch break). Poster presenters that evening were

given two minute “sound-bites” to summarize their poster and the ensuing session, accompanied by a cocktail dinner kept an energetic presence in the hall well into the evening. Monday’s scientific sessions ended by early evening to allow a brief tour of parts of Tel Aviv and of Jaffa (the oldest still functional sea port in the world), culminating in dinner at a traditional middle-eastern restaurant. Tuesday was a full lecture day. Wednesday morning’s sessions were capped off by a round- table discussion, which began by considering the importance of the gap between what one can measure and the phenomena occurring “out of sight”. The conversation developed into several interesting topics, eventually leading to a lively discussion on the fallibility of the scientific review process. The enthusiastic and dynamic discussions made it quite hard to force the session to a close. The final workshop event consisted of a short tour to the Old City in Jerusalem. Being a site holy to Judaism, Islam, and Christianity, the participants were given a brief walking tour and overview of the religious landmarks. A pleasant dinner at an ethnic restaurant concluded not only a perfect day but a workshop which will long be remembered by all participants.



Lively coffee-break discussions



Smiling Participants



Lively Poster Session



Co-Chairs: Hagai Cohen (left) and Sidney Cohen (right)

Budget, 84th IUVESTA Workshop (For 60 participants) - Sidney Cohen

INCOME

	Amount (Euro)
IUVSTA	6000
Goldschleger/Chorafas (Weizmann)	13042
Kimmel Center	1186
Registration fees	5217
TOTAL	25445

Expenses

Hall rental	593
Catering: lunches coffee breaks and Sunday cocktail dinner	8670
Jaffa tour Dinner	1283
Badara (local) Dinner	213
Travel subsidies US/Japan	2063
Travel subsidies Europe	1660
Airport transfers	1337
Conference Tour guard	172
Tour busses	938
tour guide	777
Jerusalem tour dinner	926
Bank fees and miscellaneous	237
Secretariat	451
Tags, posters, graphics and printing	949
Lodging	5217
TOTAL	25485