

2nd International Conference on
Nanotechnology: Theory and Applications

NTA2022, Cairo, 19 – 21 December 2022

Program at a glance

Start	End	Monday, December 19, 2022	
8:00	9:30	Registration	
9:30	10:30	A11	Inaugural session – talks by: <ul style="list-style-type: none"> Conference chair EITESAL President Mansoura University President Ain Shams University President French Ambassador Minister of Electricity and Renewable Energy Minister of Higher Education and Research
10:30	11:00	Coffee Break	
11:00	11:55	A12	Nobel Prize talk 1
11:55	12:05		Launching Egyptian Nanotechnology Association
12:05	13:00		Nobel Prize talk 2
13:00	14:30	Lunch	
14:30	15:10	A13	Invited talk 1
15:10	15:50		Invited talk 2
15:50	16:20	Coffee Break	
16:20	17:00	A14	Invited talk 3
17:00	17:40		Invited talk 4

Session name is composed of 3 Characters:

1 st character	Hall: A or B
2 nd character	Day: 1 - 3
3 rd character	Period: 1 - 4

Example: A23 ⇒ Hall A, 2nd day, 3rd Period

Start	End	Tuesday, December 20, 2022			
9:00	10:40	A21	Nanophotonics 1	B21	Chemical engineering 1
10:40	11:10	Coffee Break			
11:10	12:50	A22	Anti-cancer	B22	Chemical engineering 2
12:50	14:20	Lunch			
14:20	15:40	A23	Exhibitors & Poster session		
15:40	16:10	Coffee Break			
16:10	18:15	A24	Multidisciplinary	B24	Hydrogen/Fuel cell
19:30	20:30	Entertainment			
20:30	22:00	Gala Dinner and Awards			

Start	End	Wednesday, December 21, 2022			
9:00	10:40	A31	Biomedical applications	B31	Water treatment
10:40	11:10	Coffee Break			
11:10	13:00	A32	Future biomedical	B32	Electric applications
13:00	14:30	Lunch			
14:30	16:20	A33	Mechanical properties	B33	Nanophotonics 2
16:20	17:00	A34	Conference closing session		

Detailed conference program

Start	End	Monday, December 19, 2011	
8:00	9:30	A10	Registration
9:30	10:30	A11	Inauguration
10:30	11:00		Cofee Break
11:00	13:00	A12	Nobel Prize Talks chairs: Saad Hassan & Mohamed Rashad
11:00	11:55	001	Towards Adaptive Nanoscience and Nanotechnology; Jean-Marie Lehn
11:55	12:05		<i>Announcing Egyptian Nanotechnology Association</i>
12:05	13:00	002	Topology and Molecular Machines: Two Interlinked Research Fields; Jean-Pierre Sauvage
13:00	14:30	Lunch	
14:30	15:50	A13	Frontiers of Nanotechnology 1 chairs: Mohey Elmazar & Diaa Khalil
14:30	15:10	003	Impact of Nanobiotechnology on the future of Medicines: The Road toward precision Medicines – Case Studies; Shaker Moussa
15:10	15:50	013	Multifunctional EMI shielding and sensor applications with 2D materials and their composites; Choon-Gi Choi
15:50	16:20	Cofee Break	
16:20	17:40	A14	Frontiers of Nanotechnology 2 chairs: Amal Kasry & Yasser Sabry
16:20	17:00	008	Nanomaterials and membranes interfaces by Atomic Layer deposition: design, properties and applications; Mikhael Bechelany
17:00	17:40	005	Water harvesting, desalination and quality control with silicon metasurfaces and microfluidic devices; Tarik Bourouina

Start	End		Tuesday, December 20, 2011
9:00	10:40	A21	Nanophotonics 1 chairs: Sherif Kotb & Diaa Khalil
9:00	9:40	004	III-V nanowires for silicon-integrated nanophotonics: opportunities and challenges; Vladimir Dubrovskii
9:40	10:00	035	Dispersion engineering in silicon nitride waveguides; Abdelrahman Mohamed, Salsabil Elsibaie, Hussein E. Kotb, Diaa Khalil
10:00	10:20	057	Silicon photonics fabrication tolerance sensitivity study; Rabab A. Shalaby, Yasser M. Sabry, Diaa Khalil
10:20	10:40	058	Silicon photonics directional coupler measurements; Rabab A. Shalaby, Yasser M. Sabry, Diaa Khalil
9:00	10:40	B21	Chemical engineering aspects of nanotechnology 1 chairs: Saad Hassan & Said ElNashaie
9:00	9:40	010	Nanofibers synthesis and applications in renewable energy, water desalination and wastewater treatment fields; Nasser Barakat
9:40	10:00	026	Chitosan-bentonite biocomposite as an environmentally-benign adsorbent for Ciprofloxacin from aqueous solutions; Hanaa Essa, Hebatullah H. Farghal, Tarek M. Madkour, Mayyada M. H. El-Sayed
10:00	10:20	043	Hierarchical CoFe ₂ O ₄ / NiMoO ₄ -doped carbon electrodes for high bioanode performance in microbial fuel cells; Yasmin Ahmed, Fatma El-Gohary, Magdy Zahran, Mohamed Mahmoud
10:20	10:40	060	Fabrication and Characterization of a miniaturized pH potentiometric sensor based on a nano Bismuth Oxide film deposited on a Fluorine doped nano Tin Oxide glass substrate (FTO) using spray pyrolysis technique; Mahmoud A. Fathy, Ibrahim Moussa, Ayman H. Kamel, Saad S. M. Hassan
10:40	11:10		Coffee Break
11:10	12:50	A22	Anti-cancer applications of Nanotechnology chairs: Mohey Elmazar & Maged Elkemary
11:10	11:40	012	Recent progress in nanomedicine for gene delivery applications; An overview of the CERRMA Lab experience; Samar El Ashy

11:40	12:10	014	Intellectual property issues in life sciences applications of nanotechnology; Ahmed Mousa
12:10	12:30	024	MicroRNA-199a loaded gold nanoparticles; A promising tool to combat hepatocellular carcinoma; Mohamed El-Kady, Samar El Ashy, Mona Shehata, Thanaa Shalaby
12:30	12:50	025	Overcoming multidrug resistance of triple negative breast cancer cell lines using miRNA 374c-5p and its Inhibitor-Chitosan nanoparticle conjugates; Noor N. Fadhlooon, Nefertiti El-Nikhely, Marwa M. Essawy, Yousri A. Rostom, Salah El-Din Abdelmoneim, Mohamed F. Mostafa, Samar El Ashy
11:10	12:50	B22	Chemical engineering aspects of nanotechnology 2 chairs: Ahmed Elshazly & Ahmed Abu Kandil
11:10	11:50	045	Nano-technology and Nano-engineering for chemical engineers ;Said S. Elnashaie, Firoozeh Danafar, Hassan H. Rafsanjani
11:50	12:10	044	Response surface methodology for carbon dioxide reforming of methane over Ni/5La-ZrO ₂ catalyst; Tahani Gendy, Radwa El-Salamony, Seham El-Temtamy, Salwa Ghoneim, Dalia Abdel-Hafiza, Mohamed Ebiad, Ahmed El Naggar
12:10	12:30	046	Modeling, simulation and optimization of a bubbling fluidized bed reactor using Chemical Vapor Deposition (CVD) catalyst for the production of Carbon Nano Tubes (CNTs); Said S. Elnashaie, Firoozeh Danafar, Hassan H. Rafsanjani
12:30	12:50	023	Mythelene blue removal on biodegradable adsorption membranes fabricated from sugarcane bagasse pulp; Salma O. M. Elshabrawy, Amal Elhussieny, Mahmoud M. Taha, Abdelaziz H. Konsowa, Irene S. Fahim
12:50	14:20		Lunch
14:20	15:40	A23	Exhibitors' session
			Exhibitors
14:20	15:40	B23	Poster session Chairs: Mervat Khalil & Hassan Nageh
		031	The effect of radiation and cement dust on the DNA of female and male samples; M. M. El-Zaidia, Sobhy E. Hassab El-Nabi, Huda Salman, Sameh Hassan

		032	The effect of tobacco concentration on the DNA bloodsamples using the AC electrical impedance spectroscopy; M. M. El-Zaidia, Sobhy E. Hassab El-Nabi, Huda Salman, Sameh Hassan
		070	Silver nanoparticle probe for fast colorimetric determination of Tobramycin in pharmaceuticals with greenness assessment; Passant M.Medhat, Christine M.ELMaraghy, NermineV.Fares, Miriam F.Ayad
		072	Strong-base free synthesis enhancing the structural, magnetic and optical properties of Mn/Co and Zn/Co substituted cobalt ferrites; Hala G. Abd-Elbaky, M. Rasly, Reem G. Deghadi, Gehad G. Mohamed, M. M. Rashad
		054	Development of Cefoperazone loaded glycerosomes: Fabrication, optimization, and in vitro evaluation of the antimicrobial and wound healing activities; Noha Badawi, Yomna Moussa, Merna Ahmed, Mariam Ahmed, Haidy Mohamed, Madeline Adel, Mostafa Hamed, Marwa Mahmoud, Khaled Zeed, Yasmin Mostafa, Radwa Saeed
		055	Green coffee bean extract loaded solid lipid nanoparticles for management of cellulite: optimization and clinical study; Yomna A. Moussa, Mahmoud H. Teaima, Maha H. Ragaie, Dalia A. Attia, Mohamed M. Elmazar, Mohamed A. El-Nabarawi
		059	Combating type II diabetes employing biodegradable transdermal microneedles; AbdElrahman E. Abu ElKheir, Dalia H. Mady, Mahmoud Khalid, Mahmoud Magdy, Mennatollah S. Abul-Fetoh, Omar H. Selim, Salam H. Talib, Sara A. Shokr, Rania M. Yehia, Muhammed Ossama, Ahmed M. Fayez, Dalia A. Attia
		056	Revelation of the microsponges' predominant fabrication parameters and influence on in vitro biological activities of Adapalene; Rania M. Yehia, Mahmoud H. Teaima, Dalia A. Attia, Mohamed M. Elmazar and Mohamed A. El-Nabarawi

		077	Enhanced visible-light photocatalytic decontamination of methylene blue from wastewater using a biodegradable nano-composite hydrogel; Eman A. Motawea, HEND Al-aidy El-saied
		078	Conductive polypyrrole nanotubes decorated metal free P-g-C ₃ N ₄ as efficient sorbent for Hg ²⁺ capture from wastewater; Heba A.El-Sabban, M. A. Diab, Yasser Moustafa
15:40	16:10		Cofee Break
16:10	18:15	A24	Multidisciplinary applications of nanotechnology chairs: Ahmed Abu Kandil & Hassan Nageh
16:10	16:30	073	Controlling Toluene pollution using synthesized polyaniline/clay nanocomposite ; Amira Abdelraheem, Marwa Elkady, Ahmed H. El-Shazly
16:30	16:50	061	Recent trends in magnetic nanomaterials: Synthesis, properties, and their environmental and bio-applications; Mona Sayed, Mohamed Abbas, Salma Naga
16:50	17:10	075	Enhanced photocatalytic activity in Zn/Mn substituted BiFeO ₃ nanoparticles; Wael Ben Taazayet, Ikbel Mallek-Zouari, Jean-Marc Grenèche, Lotfi Bessais, Brahim Dkhil, Najeh T. Mliki
17:10	17:30	074	In-Situ determination of anticancer potential induced by Nickel Ferrite nanoparticles, against MCF-7 cancerous cells, using Atomic Force Microscopy under physiological conditions; Samia Dhahri, Marta M. Fernandez, Elias Estephan, Farah Nasraoui, Manel Othman, Csilla Gergely, Najeh T. Mliki
17:30	17:50	028	Sorption dynamics of some selected metal ions from aqueous solution using chitosan magnetized by Fe ₂ O ₃ nanoparticles; Hussein M. Ahmed, Mohamed A. El-Khateeb, Neama A. Sobhy, Nouran Y. Mohamed
17:50	18:05	038	Review: Nanofluids derived from nanotechnology: industrial applications; Mahmoud S. Ahmed, Ashraf M. Elsaid
18:05	18:15	039	Solar desalination by nanofluids; Ashraf M. Elsaid, Mahmoud S. Ahmed

16:10	17:50	B24	Nanotechnology for hydrogen and Fuel cells chairs: Nabil Sabry & Mohamed Rashad
16:10	16:50	006	High performance ceramic anode materials with structure decoration; Hailei Zhao
16:50	17:10	021	Development of a microbial photoelectrosynthesis system for efficient hydrogen generation from organic waste streams; Mohamed Mahmoud
17:10	17:30	040	Simple and novel co-precipitation method of synthesis of 3D pyramidal hierarchical Ni@ ceo2-Al2O3 nanocatalyst for cyclohexane dehydrogenation; Rasha S. Mohamed, Wael A. Aboutaleb, Heba M. Gobara
17:30	17:50	062	Design and fabrication of nanostructured electrode materials for energy conversion; Ayat El-Shazly, Mohamed Rashad, Nageh Allam

19:30	20:30	Entertainment	
20:30	22:00	Gala Dinner and Awards	

Start	End		Wednesday, December 21, 2011
9:00	10:40	A31	Biomedical applications of nanotechnology chairs: Shaker Mousa & Radwa Abou Saleh
9:00	9:40	049	Electrical, mechanical, and medical applications of nanodiamond films prepared by physical vapor deposition; Tsuyoshi Yoshitake
9:40	10:00	033	Nanotechnology revolution in confronting the extreme-drug resistance (XDR) microorganisms; Dalia M. A. Elmasry, Samar Kassem, Walaa M. Elsherif, Dalia Elhosseny, Momtaz A. Shahein
10:00	10:20	069	Dermato-kit: a new dermatophytosis lab on chip immunochromatography based diagnostic era; Hassan Aboul-Ella, Rafik Soliman, Rafik Hamed, Heidy Abo-Elyazeed
10:20	10:40	067	Glucose optical sensor based on a ternary photonic crystal comprising a superconductor layer; Safaa Alqrinawy, Sofyan Taya

9:00	10:30	B31	Water treatment applications of nanotechnology chairs: Mohamed Elhalawany & Mohamed Sameh
9:00	9:30	009	From basic sciences to applications: Towards sustainable societies; Amal Kasry
9:30	9:50	065	Novel Solar simulated photocatalytic heterolysis of pharmaceutical wastewater via slag nanocomposite immobilization: Optimization using response surface methodology; Kingsley Safo, Hussien Noby, Masatoshi Mitsuhara, Hiroshi Naragino, Ahmed H El-Shazly
9:50	10:10	066	Synthesis of hybrid ultrasonicated eggshell biochar nanomaterial for decontamination of cationic and anionic dyes from aqueous solutions; Norbert O. Rubangakene, Ahmed Elwardany, Manabu Fujii, H Sekiguchi, Hassan Shokry
10:10	10:30	041	Enhancing performance of solar distillers using functional materials; Ammar El-Sheikh, Manabu Fujii
10:40	11:10		Cofee Break
11:10	13:00	A32	Future biomedical applications of Nanotechnology chairs: Samar Elachy & Ibrahim Elsherbiny
11:10	11:40	011	Nano-biosensors: The future of health diagnostics; Rabeay Hassan
11:40	12:00	027	Novel repurposed nano-facial sheet masks for dermatological disease; Nahla Elhesaisy, Shady Swidan, Mahmoud Teaima, Mohamed El-Nabarawi
12:00	12:20	051	Synthesis of nystatin-mediated bismuth oxide nano-drug by using gamma radiation and evaluation of its in vitro antimicrobial activity; Hanady G. Nada, Gharieb S. El-Sayyad, Reham R. El-Behery, Mohamed Gobara, Ahmed I. El-Batal
12:20	12:40	042	A novel biogenic formulation for osteoporosis reduction and promotion of bone tissue formation; E. M. Mahmoud, Sally A. El Awdan, M. Sayed, S. M. Naga
12:40	13:00	071	The miracle of Ag-NPs biosynthesis using lactobacilli; E. G. El Fadly, A. M. El Baz, O. F. Magooz, E. F. Kamis, N. S. Abdel Atty, H. K. Sakr, M. A. Salama, M. A. Nashaat, M. A. El Kemyary

11:10	13:00	B32	Electric applications of nanotechnology chairs: Emad Lashkar & Sherif Kotb
11:10	11:40	007	Novel electroactive hybrid fiber materials; Weihau Tang
11:40	12:00	022	Synthesis- structure relationship in lead zirconate titanate PZT elaborated using sol-gel auto combustion approach; G. M. A. Elhefnawy, M. El-Gazery, M. M. Rashad, A. H. Khafagy
12:00	12:20	034	Parametric study of capacitively coupled Ar/CF4 plasma discharges; Mohamed G. Elsheikh, T. Al Ashram, W. M. Moslem, Mohamed Shihab
12:20	12:40	068	High performance supercapacitor electrodes based on eco-friendly glucose-derived nitrogen-doped graphene-like derivatives; Marwa Mohamed, Marwa Adel, Jehan El Nady
12:40	13:00	076	Identification of porphyrin-single walled carbon nanotube's supramolecular structure via scanning probe microscopy: towards SWNT absolute handedness chirality determination; Ahmed I. A. Abd El-Mageed, Takuji Ogawa
13:00	14:30		Lunch
14:30	15:50	A33	Enhancing mechanical properties by nanotechnology chairs: Mervat Khalil & Mohamed Gepreel
14:30	14:50	048	Bulk nanostructured Ti-alloys showed ultra-high strength; Mohamed A. Gepreel
14:50	15:10	050	Studying the microstructure, physical & mechanical properties of Al matrix reinforced with bi-modal particles coated with either Ni or Cu; Ghada Fadel, Shaimaa A. Abolkassem, Ghalia A. Gaber, Omayma A. ElKady, Aiea A. Elhabak, Mahmoud A. Adly, Lamiaa Z. Mohamed
15:10	15:30	030	Bi-modal particles effect on the microstructure, mechanical properties and corrosion behavior of Ti-nano composite for dental applications; Omayma El-Kady, Ahmed El-Tantawy, H. M. Yehia, I. M. Ghayad

15:30	15:50	047	Utilization of nano-hydroxyapatite in the fabrication of ceramic bodies with enhanced mechanical properties and translucency; S. M. Naga, N. El-Mehalawy, M. Awaad
14:30	16:20	B33	Nanophotonics 2 chairs: Ahmed Morshed & Emad Lashkar
14:30	15:00	020	Si nano_photonics for data center applications; Diao Khalil
15:00	15:20	052	Experimental characterization of spectral multi-mode double layer InP/AlGaInP quantum dot laser; Radwa A. Abbas, Yasser M. Sabry, Haitham Omran, Zhihua Huang, Michael Zimmer, Michael Jetter, Peter Michler, Diao Khalil
15:20	15:40	053	Experimental characterization of single and double layer InP/AlGaInP quantum dot laser; Radwa A. Abbas, Yasser M. Sabry, Haitham Omran, Zhihua Huang, Michael Zimmer, Michael Jetter, Peter Michler, Diao Khalil
15:40	16:00	063	Effects of structural disorder and Urbach's rule in borate glasses doped with Erbium oxide; Ahmed Henaish, Osama Hemedat, Taher Sharshar, Dmitriy Spiridonov, Ilya Weinstein, Aly Abouhaswa
16:00	16:20	064	Controlling the density of plasma species in Ar/CF ₄ radiofrequency capacitively coupled plasma discharges; Mohamed G. Elsheikh, Tarik El-Ashram, Waleed M. Moslem, Yasser Abdella, Mohammed Shihab
16:20	17:00	A33	Closing session