

## Curriculum Vitae

### Dr. Mohammed Abdelhamid Khairy Serageldin

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### Education

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10/2006 – 09/2008	Ph.D. in Chemistry, University Braunschweig, Thesis title: " <i>Risk Posed By Anthropogenically Driven Toxic Pollutants in Abu Qir Bay, East Alexandria, Egypt</i> ". <b>Grade: Excellent</b>
08/2001 – 04/2005	M. Sc. in Environmental Sciences, Faculty of Science, Alexandria University - Egypt, Thesis title: " <i>Assessment of Marine Pollution in EL-Mex Bay Sediments, West Alexandria, Egypt</i> ".
09/1998 – 09/1999	Courses for the fulfillment of the Master degree in Environmental Sciences, Faculty of Science, Alexandria University, Chemistry-Physics group. <b>Grade: Very Good.</b>
09/1994 – 07/1998	B. Sc., Environmental Sciences, Faculty of Science, Alexandria University. <b>Grade: Very Good.</b>

### Professional Experience

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#### Career

11/2014-Present	Associate professor, Department of Environmental Sciences, Faculty of Science, Alexandria University
08/01/2018 -Present	Senior Chemist and Lab Manager, Berkeley Analytical, Richmond, CA
11/2016 – 07/27/2018	Air Pollution/Laboratory Scientist, Douglas County Health Department, Omaha NE 68105, USA.
05/2014-10/2016	Senior post doctor, Graduate School of Oceanography, University of Rhode Island
02/2012-04/2014	Post Doc fellow, Graduate School of Oceanography, University of Rhode Island
05/2011-01/2012	Fulbright Scholarship, Graduate School of Oceanography, University of Rhode Island

/2014 Assistant professor, Department of Environmental Sciences, Faculty of Science, Alexandria University

2005-2006 Assistant Lecturer, Department of Environmental Sciences, Faculty of Science, Alexandria University

1999-2005 Laboratory instructor of Environmental Geology, Environmental Chemistry and Environmental Pollution, Department of Environmental Sciences, Faculty of Science, Alexandria University

### Others

2008 Member of the organizing committee of the 1<sup>st</sup> and 2<sup>nd</sup> International Conference of Contemporary Environmental Issues in Arid and Semi-Arid Regions (Climate Changes: Envi 2008, 2010)

2009 Member of the organizing committee of the Environmental Forum, Faculty of Science, Alexandria University

2009 Giving training courses on ICP in Abu Qir Fertilizer Company, Alexandria, Egypt

### Technical Experience

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- Chromatographic Analysis (GC/ECD, GC/MS, GC/MSMS, LC/MSMS, TD/GCMS), Spectroscopic analysis (ICP-OES including the hydride generation technique).
- Air quality monitoring instruments (Gases, continuous and filter-based particulates)
- Director of the GC/MS unit of the Central Laboratory, Faculty of Science, Alexandria University (11/2008-4/2011)
- Present, Member of the executive team of the Environmental Impact Assessment Studies at the Faculty of Science, Alexandria University

### Workshops attended

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- **2017**, National Incident Management System (NIMS): An Introduction, Emergency Management Institute, USA.
- **2017**, Introduction to incident command system, Emergency Management Institute, USA.
- **2017**, ICS for Single Resources and Initial Action Incident,, Emergency Management Institute, USA.
- **2008**, First International Conference on Contemporary Environmental Issues in Arid and Semi-Arid Regions (Climate Changes: Envi 2008).
- **2008**, participated in a workshop on **University Administrations** at the center of the Faculty and Leadership Development Project (FLDP), Alexandria University.
- **2008**, participated in a workshop on **Skills of Efficient Interaction and Communication** at the FLDP.
- **2008**, participated in a workshop on **Skills of Efficient Teaching** at the FLDP.
- **2008**, participated in a workshop on **Quality Standards of Teaching** at the FLDC.
- **2008**, participated in a workshop on **Efficient Teaching** at the FLDP.

- **2008**, participated in a workshop on **Ethics of the Academia Career** at the FLDP.

## Teaching experience

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### a- Undergraduate courses

Environmental Legislations, Environmental Chemistry, Development of Natural Ecosystems, Environmental Geology, Desert and Desertification, Environmental pollution and Occupational Hygiene

### b- Postgraduate courses

Environmental Pollution, Aquatic Pollution, Natural Gas and the Environment, Environmental Risk Assessment, Atmospheric Pollution and Climate Change, Advanced Environmental Geochemistry, Earth Science, Man and the Environment, Quality Assurance in Analytical Chemistry

## Research interests

Use of passive samplers to detect gradients of organic pollutants in the atmosphere and hydrosphere

Sources, fate and transport of Persistent organic pollutants (POPs) and Emerging contaminants.

Biogeochemistry of POPs

Environmental Risk Assessment of POPs

## Conferences attended

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<b>December, 2014</b>	AGU Fall Meeting, USA: Air-Water Exchange of Legacy and Emerging Organic Pollutants across the Great Lakes
<b>August, 2014</b>	Abstract of Papers at ACS National meeting, USA: Spatial trends and sources of gaseous and freely dissolved persistent organic pollutants in the Great Lakes basin and modeling the air-water exchange using low density polyethylene passive samplers
<b>October, 2012</b>	Passaic River Symposium V. Today's status, tomorrow's perspective (Poster)
<b>October 2009</b>	1 <sup>st</sup> International conference of Water, Wastewater and the Environment- Urgent issues for sustainability, Braunschweig, Germany (Talk)
<b>November 2009</b>	2 <sup>nd</sup> International Symposium on »Chances and Risks of Wastewater Recycling, Braunschweig, Germany (Talk)
<b>June 2010</b>	"Microalgae - Sustainable Resource for Energy and Chemical Feedstock Production - Scientific Aspects and Industrial Applications", Braunschweig, Germany (Talk)

## Special Skills

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<b>Languages</b>	English: Toefl (267/300, computer based)
	German Fair
	Arabic mother tongue

<b>Computer skills</b>	Microsoft office and its applications ArcView GIS, SPSS, SigmaPlot
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## Scholarships

<b>2006-2008</b>	DAAD PhD Scholarship (Technical University of Braunschweig, Germany)
<b>2011-2012</b>	Fulbright Post doctor scholarship (Graduate School)

### **Research projects**

Sources and risk assessment of toxic organic pollutants in the ambient air and street dust of Egypt (Fulbright Scholarship)

Using polyethylene passive samplers to monitor atmospheric levels of POPs in Egypt (Fulbright Scholarship)

Suitability of composted sewage sludge for application as a fertilizer in agriculture

Chlorinated hydrocarbons in fish and sediments of Lake Qarun, Egypt

Biodiesel production using a microalgal mass production system based on domestic wastewater (STDF, Egypt)

The Availability and Bioaccumulation of Sedimentary 2,3,7,8-TCDD and Other Persistent Bioaccumulative Toxic Compounds in the Lower Passaic River (Hudson River Foundation Award # HRF 2011-5, USA)

Passive sampler research in the Great Lakes (EPA's Great Lakes Restoration Initiative Award GLAS No. 00E00597-0).

POPs in Air and Water from the Antarctic (National Science Foundation, ARC 1203486, USA).

POPs in seal milk and blubber and whale blubber from the Antarctic (National Science Foundation, ARC 1203486, USA).

Development of a passive multisampling method to measure Dioxins/Furans and other contaminant bioavailability in aquatic sediments (SERDP Project ER-2538, USA)

### **Presentations**

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- Sedimentary Profiles of PAH's in EL-Mex Bay Cores, West Alexandria, Egypt (8<sup>th</sup> international conference on petroleum and the environment)
- Evaluation of wastewater treatment problems in Egypt: Towards sustainable management. 1<sup>st</sup> International conference of Water, Wastewater and the Environment- Urgent issues for sustainability, Braunschweig, Germany
- Biofuel Production Opportunity in Egypt as a Sustainable Source of Green Energy Alternative to Fossil Fuels. "Microalgae - Sustainable Resource for Energy and Chemical Feedstock Production - Scientific Aspects and Industrial Applications", Braunschweig, Germany

### **Posters**

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Using Polyethylene Passive Samplers to Investigate the Transport and Bioavailability of Persistent Organic Pollutants in the Lower Passaic River

## List of Publications

<p>Mohammed A Khairy, Greg Noonan and Rainer Lohmann, 2019</p>	<p>Uptake of hydrophobic organic compounds, including organochlorine pesticides, polybrominated diphenyl ethers, and perfluoroalkyl acids in fish and blue crabs of the lower Passaic River, New Jersey, USA; <i>Environmental Toxicology and Chemistry</i> <a href="https://doi.org/10.1002/etc.4354">https://doi.org/10.1002/etc.4354</a></p>
<p>Mohammed A Khairy, Rainer Lohmann, 2019</p>	<p>Organophosphate flame retardants in the indoor and outdoor dust and gas-phase of Alexandria, Egypt. <i>Chemosphere</i>, 220, 275-285</p>
<p>RO Meire, M. Khairy, Dave Adelman, P.M.A. Galvao, J.P.M. Torres, O. Malm, R. Lohmann</p>	<p>Passive sampler-derived concentrations of PAHs in air and water along Brazilian mountain transects, <i>Atmospheric Pollution Research</i>, 10, 635-641</p>
<p>Mohammed A Khairy, Rainer Lohmann, 2018</p>	<p>Selected organohalogenated flame retardants in Egyptian indoor and outdoor environments: Levels, sources and implications for human exposure. <i>Science of the Total Environment</i>, 633, 1536-1548; <b>DOI: 10.1016/j.scitotenv.2018.03.243</b></p>
<p>Erin Markham, Emily K. Brault, Mohammed Khairy, Anna R. Robuck, Michael E. Goebel, Mark G. Cantwell, Rebecca M. Dickhut, and Rainer Lohmann, 2018</p>	<p>Time Trends of Polybrominated Diphenyl Ethers (PBDEs) in Antarctic Biota. <i>ACS Omega</i>, 2018, 3, 6595-6604</p>
<p>W Zhao, M Cai, D Adelman, M Khairy, P August, R Lohmann, 2018</p>	<p>Land-use-based sources and trends of dissolved PBDEs and PAHs in an urbanized watershed using passive polyethylene samplers. <i>Environmental Pollution</i>, 238, 573-580;</p>
<p>Michiel T. O. Jonker, Stephan A. van der Heijden, Dave Adelman, Jennifer N. Apell, Robert M. Burgess, Yongju Choi, L, Loretta A. Fernandez, Geanna M. Flavetta, V Upal Ghosh, Philip M. Gschwend, Sarah E. Hale, Mehregan Jalalizadeh, Mohammed Khairy, Mark A. Lampi, Wenjian Lao, Rainer Lohmann, Michael J. Lydy, Keith A. Maruya, Samuel A. Natile, Amy M. P. Oen, Magdalena I. Rakowska, Danny</p>	<p>Advancing the Use of Passive Sampling in Risk Assessment and Management of Sediments Contaminated with Hydrophobic Organic Chemicals: Results of an International Ex Situ Passive Sampling Interlaboratory Comparison. <i>Environmental Science and Technology</i>, 52 (6), 3574 – 3582; <b>DOI: 10.1021/acs.est.7b05752</b></p>

Reible, Tatsiana P. Rusina, Foppe Smedes, and Yanwen Wu (2018)	
MA Khairy, R. Lohmann (2017)	Using Polyethylene Passive Samplers to Study the Partitioning and Fluxes of PBDEs in an Urban River. <i>Environmental Science and Technology</i> , 51 (16), 9062-9071; <b>DOI: 10.1021/acs.est.7b02418</b> .
Assem Barakat, MA Khairy, I Aukaily (2017)	Bioaccumulation of organochlorine contaminants in fish species from Lake Qarun, a protected area of Egypt. <b><i>Toxicological and Environmental Chemistry</i></b> , 99, 1, 117-133.
Assem Barakat, MA Khairy, MR Mahmoud (2017)	Organochlorine pesticides and polychlorinated biphenyls in sewage sludge from Egypt. <b><i>Journal of Environmental Science and Health</i></b> , Part A 1-7.
Ying Liu, Siyao Wang, Carrie A. McDonough, Mohammed Khairy, Derek Muir, and Rainer Lohmann (2016)	Estimation of Uncertainty in Air–Water Exchange Flux and Gross Volatilization Loss of PCBs: A Case Study Based on Passive Sampling in the Lower Great Lakes. <b><i>Environmental science &amp; technology</i></b> 50 (20), 10894-10902.
MA Khairy, JL Luek, R Dickhut, R Lohmann (2016)	Levels, sources and chemical fate of persistent organic pollutants in the atmosphere and snow along the western Antarctic Peninsula. <b><i>Environmental Pollution</i></b> 216, 304-313.
RO Meire, M Khairy, AC Targino, PMA Galvão, JPM Torres, O Malm, Rainer Lohmann (2016)	Use of passive samplers to detect organochlorine pesticides in air and water at wetland mountain region sites (S-SE Brazil). <b><i>Chemosphere</i></b> 144, 2175-2182.
AO Barakat, M Khairy, I Aukaily (2016)	Bioaccumulation of organochlorine contaminants in fish species from Lake Qarun, a protected area of Egypt. <b><i>Toxicological &amp; Environmental Chemistry</i></b> , 1-17.
M Khairy, K Barrett, R Lohmann (2016)	Changing sources of polychlorinated dibenzo-p-dioxins and furans in sediments and ecological risk for nekton in the lower Passaic River and Newark Bay, New Jersey, USA. <b><i>Environmental Toxicology and Chemistry</i></b> 35 (3), 550-562.
Y Liu, S Wang, CA McDonough, M Khairy, DCG Muir, PA Helm, Rainer Lohmann (2015)	Gaseous and Freely-Dissolved PCBs in the Lower Great Lakes Based on Passive Sampling: Spatial Trends and Air–Water Exchange. <b><i>Environmental science &amp; technology</i></b> 50 (10), 4932-4939.
SM Nasr, NF Soliman, MA Khairy, MA Okbah (2015)	Metals bioavailability in surface sediments off Nile delta, Egypt: Application of acid leachable metals and sequential extraction techniques. <b><i>Environmental monitoring and assessment</i></b> 187 (6), 1-10.
M Khairy, D Muir, C Teixeira, R Lohmann (2015)	Spatial Distribution, Air–Water Fugacity Ratios and Source Apportionment of Polychlorinated Biphenyls in the Lower Great Lakes Basin. <b><i>Environmental science &amp; technology</i></b> 49 (23), 13787-13797.
MA Okbah, SM Nasr, NF Soliman, MA Khairy (2014)	Distribution and contamination status of trace metals in the Mediterranean coastal sediments, Egypt. <b><i>Soil and Sediment Contamination: An International Journal</i></b> 23 (6), 656-676.
SM Nasr, MA Khairy, MA Okbah, NF Soliman (2014)	AVS-SEM relationships and potential bioavailability of trace metals in sediments from the Southeastern Mediterranean sea, Egypt. <b><i>Chemistry and Ecology</i></b> 30 (1), 15-28.
MA Khairy, R Lohmann (2014)	Field calibration of low density polyethylene passive samplers for gaseous POPs. <b><i>Environmental Science: Processes &amp; Impacts</i></b> 16 (3), 414-

	421.
M Khairy, D Muir, C Teixeira, R Lohmann (2014)	Spatial trends, sources, and air–water exchange of organochlorine pesticides in the Great Lakes Basin using low density polyethylene passive samplers. <b><i>Environmental science &amp; technology</i></b> 48 (16), 9315-9324.
MA Khairy, MP Weinstein, R Lohmann (2014)	Trophodynamic behavior of hydrophobic organic contaminants in the aquatic food web of a tidal river. <b><i>Environmental science &amp; technology</i></b> 48 (21), 12533-12542
CA McDonough, MA Khairy, DCG Muir, R Lohmann (2014)	Significance of population centers as sources of gaseous and dissolved PAHs in the lower Great Lakes. <b><i>Environmental science &amp; technology</i></b> 48 (14), 7789-7797
Khairy, M.A. and Lohmann R. (2013)	Feasibility of using low density polyethylene sheets to detect atmospheric organochlorine pesticides in Alexandria, Egypt. <b><i>Environmental pollution</i></b> 181, 151-158
Khairy, M.A. and Lohmann R. (2013)	Source apportionment and risk assessment of PAHs in the atmospheric environment of Alexandria, Egypt. <b><i>Chemosphere</i></b> 91, 895-903
Barakat, A.O., Khairy, M.A. and Enas A. (2013)	Persistent organochlorine pesticide and PCBs residues in surface sediments of Lake Qarun, a protected area of Egypt. <b><i>Chemosphere</i></b> 90, 2467-2476.
Khairy, M.A. and Lohmann R. (2012)	Field validation of polyethylene passive air samplers for parent and alkylated PAHs in Alexandria, Egypt. <b><i>Environmental Science and Technology</i></b> 46, 3990-3998.
Khairy, M.A. (2012)	Assessment of priority phenolic compounds in sediments from an extremely polluted coastal wetland (Lake Maryut, Egypt). <b><i>Environmental Monitoring and Assessment</i></b> , DOI: 10.1007/s10661-012-2566-4
Khairy, M.A., Kolb, M., Mostafa, A.R., EL-Fiky, A. and Bahadir, M. (2012)	Risk Posed by Chlorinated Organic Compounds in Abu Qir Bay, East Alexandria, Egypt. <b><i>Environmental Science and Pollution Research</i></b> 19, 794-811.
Khairy, M.A., Kolb, M., Schmidt, C., Zachmann, D. W., Mostafa, A.R., EL-Fiky, A. and Bahadir, M. (2011)	Trace elements in sediments and mussels – spatial distribution, chemical partitioning, and risk assessment. <b><i>Clean – Soil, Air, Water</i></b> 38, 1184-1193.
Khairy, M., Barakat, A., Mostafa, A. and Wade, T. (2011)	Multielement determination by flame atomic absorption of road dust samples in Delta Region, Egypt. <b><i>Microchemical Journal</i></b> 97, 234-242.
Khairy, M.A., Kolb, M., Mostafa, A.R., EL-Fiky, A. and Bahadir, M. (2009)	Risk assessment of polycyclic aromatic hydrocarbons in a mediterranean semi-enclosed basin affected by human activities: Abu Qir Bay, East Alexandria, Egypt. <b><i>Journal of Hazardous Materials</i></b> 170, 389-397.

## References

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