



## Personal Information

### Saeed Nazari Kudahi

- **Date/Place of Birth:** Jun. 28, 1978/Tehran, Iran
- **Gender/Marital Status/Childs:** Male/Married/One (son)
- **Email:** snazarikudahi@gmail.com

## Education

- **Bachelor of Science in Applied Chemistry**  
Department of Chemistry, University of Guilan, Iran (Oct. 1996- Sep. 2000)  
GPA: 15.46 /20
- **Master of Science in Analytical Chemistry**  
Department of Chemistry, Amirkabir University, Iran (Oct. 2000- Jan. 2003)  
GPA: 17.71/20, Dissertation degree: Excellent: 19.75/20  
**Dissertation:** “Recovery of Nitric acid from Pickling Waste Solutions by Donnan Dialysis with Heterogeneous Anion – Exchange Membrane”
- **Ph.D in Environmental Engineering – Air pollution Engineering**  
Faculty of Environment, University of Tehran, Iran (Oct. 2013- Oct. 2017)  
GPA: 18.62/20, Dissertation degree: Excellent: 20/20  
**Dissertation:** “The theoretical and empirical analysis of CO<sub>2</sub> adsorption from the flue gas of the combined cycle thermal power plants through fabrication of graphene and garphene oxide based nanocomposite adsorbents”

## Appointments

- **Plan Manager (Feb. 2017 to present)**  
Deputy of Technology, Niroo Research Institute<sup>1</sup>  
“Development the technologies related to air pollutants and greenhouse gases emissions control from Iran's thermal power plants”
- **Selected projects under the mentioned plan:**
  - Design and installation on-line atmospheric dispersion modeling system for Iranian thermal power plants (April 2019- Nov. 2021)
  - Design and installation Measuring, Reporting and Verification (MRV) system for GHGs emissions from Iranian thermal power plants (April 2021 to present)
  - Modeling changes in secondary inorganic aerosol formation (sulfate, nitrate and ammonium aerosols) at five selected power plants (April 2022 to present)
  - Atmospheric dispersion modeling of air pollutants emitted from Iran’s heavy oil fired steam power plants (Sep. 2021 to present)
- **Plan Manager (Feb. 2017 to March 2022)**  
Deputy of Technology, Niroo Research Institute  
“Instrumentation technology development related to determination of chemical compounds, combustion, fuel quality, flue gas monitoring and combustible gas leak detection”
- **Selected projects under the mentioned plan:**
  - Design, construction and testing of NDIR optical bench for analysis of Flue gas components (April 2017 to Feb. 2021)
  - Design, construction and testing of ZrO<sub>2</sub> sensor for oxygen measurement (April 2019- Feb. 2021)

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<sup>1</sup> Iranian Electric Power Research Institute

- Supervision on the installation and operation of Continuous Emission Monitoring system (CEMs) for Shand thermal steam power plant (Feb. 2019 to Feb. 2021)
- Design, construction and testing of Luminescence Dissolved Oxygen device in feed water of boiler (April 2021 to present)

**Work Experience**

- **Research assistant (May. 2005 –Sep. 2006)**  
Air and Physical pollution Reference Laboratory, Energy and Environment Research Center, Niroo Research Institute (NRI)
- **Project Manager (Sep. 2006 –Dec. 2009)**  
Energy and Environment Research Center, Niroo Research Institute (NRI)  
Project Title: “Developing Pollutant Map of Iran’s thermal power plants”
- **Project Manager (Sep. 2007-Mar. 2008)**  
Energy and Environment Research Center, Niroo Research Institute (NRI)  
Project Title: “Developing New Reference Laboratories for Iran's Electric Power Industry in the Field of Energy and Environment”
- **Project Manager (Sep. 2008 –Feb. 2011)**  
Energy and Environment Research Center, Niroo Research Institute (NRI)  
Project Title: “Design and Construction of Continuous Emission Monitoring System for Power Plant flue gas”
- **Project Manager (Mar. 2010-Jul. 2012)**  
Energy and Environment Research Center, Niroo Research Institute (NRI)  
Project Title: “Designing and Building of Hydrogen Refueling Station equipped with Stationary Reformer Unit for Hydrogen Production, Compression, Storage and Dispensing as well as Technology Reviewing”
- **Project Manager (Sep. 2010-Dec. 2010)**  
Energy and Environment Research Center, Niroo Research Institute (NRI)  
Project Title: “Feasibly Study of CO<sub>2</sub> Capture by Membrane Technology”
- **Project Manager (Mar. 2011- Jun. 2011)**  
Energy and Environment Research Center, Niroo Research Institute (NRI)  
Project Title: “Feasibly Study of Using Hybrid of Molten Carbonate Fuel Cell (MCFC) and Gas Turbine for CO<sub>2</sub> Separation and High Efficiency Electricity Generation”
- **Project Manager (Sep. 2012- Jan. 2016)**  
Energy and Environment Research Center, Niroo Research Institute (NRI)  
Project Title: “Study and Investigation of Continuous Monitoring of Organic Pollutants in the Rivers by the Sensors”
- **Project Manager (Apr. 2014- Oct. 2015)**  
Energy and Environment Research Center, Niroo Research Institute (NRI)  
Project Title: “The Investigation and Study of Mercury Emissions Estimation from Tabass Coal- Fired Power Plant”
- **Project Manager (Sep. 2015-Feb. 2017)**  
Energy and Environment Research Center, Niroo Research Institute (NRI)  
Project Title: “Designing, engineering and establishing predictive emission monitoring system for power plants”

- **Project Manager (Feb. 2016-March 2017)**  
Energy and Environment Research Center, Niroo Research Institute (NRI)  
Project Title: “Determination of the effective factors portion on CO<sub>2</sub> emissions from Iran's power sector using stochastic impacts by regression on population, affluence and technology (STIRPAT) model”
- **Research Staff (May 2005- Jan.2019)**  
Environmental research group, Energy and Environment Research Center, Niroo Research Institute (NRI)
- **Assistant Professor (Jan. 2019 to present)**  
Environmental research group, Energy and Environment Research Center, Niroo Research Institute (NRI)

### International Experiences

- **Iran's representative in Open-Ended Scientific Group for Effectiveness Evaluation of Minamata Convention on Mercury (Jun 2022 to present)**
- **Member of Iran's Delegation Party in the Fourth meeting of the Conference of the Parties to the Minamata Convention on Mercury (COP-4) – The First Segment (Nov. 2021)**

### Publications

- **Peer-reviewed Journals**
- **S. Nazari**, O. Shahhoseini, A. Sohrabi-Kashani, S. Davari, R. Paydar, Z. Delavar-Moghadam. Experimental determination and analysis of CO<sub>2</sub>, SO<sub>2</sub> and NO<sub>x</sub> emission factors in Iran's thermal power plants. *Energy*, 35 (7) (2010), 2992-2998.
- **S.Nazari**, O.Shahhoseini, A.Sohrabi- Kashani, S.Davari, H.Sahabi, A.Rezaeian. SO<sub>2</sub> pollution of heavy oil -fired Steam Power Plants in Iran, *Energy Policy*, 43 (2012), 456–465.
- A.R. Noorpoor and **S. Nazari**. An analytical study of the acoustic force implication on the settling velocity of non-spherical particles in the incompressible Newtonian fluid. *Asia-Pacific Journal of Chemical Engineering*, 2014.
- A.R Noorpoor and **S. Nazari Kudahi**. CO<sub>2</sub> emissions from Iran's power sector and analysis of the influencing factors using the stochastic impacts by regression on population, affluence and technology (STIRPAT) model. *Carbon Management* 6.3-4 (2015), 101-116.
- A.R.Noorpoor and **S. Nazari Kudahi**. Analysis and study of CO<sub>2</sub> adsorption on UiO-66/graphene oxide composite using equilibrium modeling and ideal adsorption solution theory (IAST). *Journal of Environmental Chemical Engineering* 4(1) (2016), 1081-1091.
- **Saeed Nazari Kudahi**, Ali Reza Noorpoor, and Niyaz Mohammad Mahmoodi. "Determination and analysis of CO<sub>2</sub> capture kinetics and mechanisms on the novel graphene-based adsorbents." *Journal of CO<sub>2</sub> Utilization* 21 (2017), 17-29.
- **Saeed Nazari Kudahi**, Ali Reza Noorpoor, and Niyaz Mohammad Mahmoodi. "Adsorption performance indicator for power plant CO<sub>2</sub> capture on graphene oxide/TiO<sub>2</sub> nanocomposite" *Iranian Journal of Chemistry and Chemical Engineering*, 38(3), 2019, 293-307.

- Maryam Avishan, **Saeed Nazari Kudahi**, and Alireza Noorpoor. "Evaluation of CO<sub>2</sub> capture performance on pumice modified by TEPA". *International Journal of Environmental Science and Technology*. 17(11), 2020, 4441-4454.
- Alireza Noorpoor, Maryam Avishan, **Saeed Nazari Kudahi** "Experimental and Theoretical Investigation of CO<sub>2</sub> Adsorption on Amine-modified Pumice as an Affordable Adsorbent" *Iranian Journal of Chemistry and Chemical Engineering*, 40(4) (2021), 1148-1161.
- **Book Chapter**
- Azam Bagheri Pebdeni, Saeed Nazari Kudahi, Morteza Hosseini, Environmental applications of luminescent metal nanoclusters, *Luminescent Metal Nanoclusters*, Woodhead Publishing, 2022, 465-491.
- **Conference Presentation**
- Ali Reza Noorpoor, **Saeed Nazari Kudahi**, Niaz Mohammad Mahmoodi, Evaluation of mesoporous graphene oxide-TiO<sub>2</sub> nanocomposite for CO<sub>2</sub> Capture of thermal power plants with idealized PSA process, 4<sup>th</sup> International Conference on Environmental Science & Technology, Vienna, Austria, 29-31 March, 2018.
- **S.Nazari**, O.Shahhoseini, A.Sohrabi- Kashani, Z. Delavar-Moghadam. Human risk estimation of SO<sub>2</sub> emissions from Besat power plant using SimPacts model. 10<sup>th</sup> International Energy Conference 2014, Tehran, Iran, 26-27 Aug.2014.
- **S.Nazari**, A.Sohrabi-Kashani, M.Alaei, H.Adibzadeh, A.Hamzehloei. Design Construction of Continuous Emission Monitoring System for Power Plant Flue Gas.
- 8<sup>th</sup> International Energy Conference 2011, Tehran, Iran, 24-25 May. 2011.
- **S.Nazari**, A. Sohrabi Kashani, S. Davari, Z. Delavar Moghaddam. Emission Factor Determination of Flue Gases in Iran's Thermal Power Plants and Comparing with North American Countries. 7<sup>th</sup> National Conference of Energy 2009, Tehran, Iran, 22-23 Dce. 2009.
- **S.Nazari**, A. Rezaeian, A. Sohrabi Kashani, S. Davari, Z. Delavar Moghaddam. Dispersion Modeling of SO<sub>2</sub> and NO<sub>x</sub> Emitted from a Gas Turbine Power Plant Using by ADMS Software. 3<sup>th</sup> Conference of Environmental Engineering 2009, Tehran, Iran, 7-8 Oct. 2009.
- **S.Nazari**, H. Adibzadeh, A. Sohrabi Kashani, Sh. Shivaiei. Prediction of SO<sub>2</sub> Emission from Iran's Steam Power Plants in 2025. 1<sup>st</sup> National Conference of Thermal Power Plant 2009, Tehran, Iran, 16-17 May.2009.
- **S.Nazari**, S.Davari, A.Sohrabi-Kashani, Z.Delavar-Moghaddam. Determining Emission Factors of Flue Gas, Wastewater and Solid Waste in a Steam Power Plant. 1<sup>st</sup> Fuel, Energy and Environment National Congress 2008, Meshkindasht, Iran, 27-29 May. 2008.
- **S.Nazari**, M. Salehirad, A. Hamzehloei. Alkali Catalytic Methanolysis of waste Cooking Oil for Biodiesel Production as a Renewable Fuel 2006. Tehran, Iran 1<sup>st</sup> Fuel & Combustion Conference, 15-16 Feb. 2006.
- **S.Nazari**, Sh.Borhani, F.Shemirani. Fabrication of Heterogeneous Anion –Exchange Membrane and Study of the effect of Variation of Anion-Exchange Resin Content on Electrochemical and Mechanical Properties of it. 3<sup>th</sup> Students Conference of Chemical Engineering 2005, Tehran, Iran, 8-10 March .2005.

**Peer Reviewer of ISI Journals**

- Processes (MDPI)
- Atmosphere (MDPI)
- Sustainability (MDPI)
- International Journal of Environmental Research and Public Health (MDPI)

**Honor and Awards**

- Ranked 1<sup>st</sup> in Nationwide Universities Entrance Exam for Ph. D, 2013
- Outstanding project manager, Ranked 3<sup>th</sup>, Niroo Research Institute, 2009

**Research Interests**

- Carbon Management
- Air Quality Management
- Air Pollution Emission Estimation
- Atmospheric Dispersion Modeling
- Human Risk Assessment
- Impact of Population, Affluence and Technology on GHG Emissions

**Participate in the workshops**

- Introduction to ISO 17025 in 2005
- SimPacts software course to assess the risk of emissions from the power plants on human health and calculation of external costs in 2005
- Introduction to uncertainty in the laboratory results in 2005
- Introduction to Arc GIS software in 2007
- Introduction to Chemometrics in 2007
- Project management in 2008
- ICDL seven skills from 2009 to 2010
- Materials studio molecular simulation software training course in 2015
- Introduction to Environmental Product Declaration in 2018
- Training course on principles of negotiation skills in 2019
- The art of presentation in 2019
- Carbon footprint calculation in 2020

**Scientific lectures and workshop**

- Carbon Management in thermal power plants", NRI, Nov. 2018
- Applied methods to reduce NOx emissions in power plants, NRI, Oct. 2018
- Carbon management of thermal power plants", NRI, Jun. 2019
- Power plant fuel, smoke and combustion monitoring systems, NRI, Jul. 2019

**English Language Proficiency**

- Writing, Speaking, Reading and Listening: Professional working proficiency