



Curriculum Vitae

Hossein Sabahi

Ph.D. in Crop Physiology

Department of Agroecology, Environmental Sciences Research Institute, Shahid Beheshti University, Tehran, Iran (from 2005 to 2010)

Department of Life Science Engineering (Nanobiotechnology Group), Faculty of New Sciences & Technologies, University of Tehran, Tehran, Iran. (from 2010 to now)

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1. Research Fields currently and Interests:

Mimicking Nature:

- 1- Production the controlled and slow release drug delivery systems by Natural Nanoparticles and Plant Metabolites.
- 2- Production Nano-fertilizers, Nano-fungicides and Nano-pesticides by Natural Nanoparticles and Plant Metabolites.
- 3- Production urea coated with plant powders-rich of polyphenol as the N slow-release fertilizer.
- 4- Encapsulation the plant metabolites (antioxidants) into Natural Nano-Microparticles to increase their bioavailability and biodistribution.

2. Papers in ISI Journals:

1.2. Submitted:

- 1- **Sabahi, H.**, Balooch, M.R., Amminian, A. 2017. Postharvest management of *Botrytis cinerea* in apple fruit via Mt/PFPE nanocomposite. *Food packaging and Shelf life*.
- 2- **Sabahi, H.**, Ruthakli, A., Riazi, G.H. 2017. Introducing the clay/nettle extract composite as an efficient blood HbA_{1c}-reducer in diabetic rats. *Colloids and Surfaces, B:Biointerfaces*.

2.2. Published:

- 1- **Sabahi, H.**, Khorami, M., Rezayan, A.H., Jafari, Y., Karami, M.H. 2018. Surface functionalization of halloysite nanotubes via curcumin inclusion. *Colloids and Surfaces A: Physicochemical and Engineering Aspects*. 538: 834-840.
- 2- **Sabahi, H.**, Rabiei, M., Jafari, Y., Asilan, K.S. 2017. Evaluation of pomegranate fruit powder coated on urea as urea-N-immobilizer and soil-P-mobilizer. *Communication in Soil Science and Plant analysis*. 48: 285–293.
- 3- Golbashy, M., **Sabahi, H.**, Allahdadi, I., Nazokdast, H., Hossein, M. 2017. Synthesis of highly intercalated urea-clay nanocomposite via domestic montmorillonite as eco-friendly slow-release fertilizer. *Archive of Agronomy and Soil Science*. 63: 84–95.
- 4- Rabiei, M., **Sabahi, H.**, Rezayan, A.H., 2016. Gallic acid-loaded montmorillonite nanostructure as a new controlled release system. *Applied Clay Science*. 119: 236-242.
- 5- Jafari, Y., **Sabahi, H.**, Rahai, M. 2016. Stability and loading properties of curcumin encapsulated in *chlorella vulgaris* cells. *Food Chemistry*. 211:700-706.
- 6- Golbashy, M., **Sabahi, H.**, Allahdadi, I., Nazokdast, H., Hossein, M. 2016. Synthesis a drug delivery vehicle by intercalation of pomegranate (*Punica granatum L.*) peel extract into montmorillonite. *Biomedical and Pharmacology Journal*. 9:385-392.
- 7- **Sabahi, H.**, S. Siadat Jamian, F. Ghashghaee Abdi. 2016. Assessment of urea coated with pomegranate fruit powder as N slow-release fertilizer in maize. *Journal of Plant Nutrition*. 39 : 2092–2099.
- 8- **Sabahi, H.**, A.H. Rezayan, S. Sadeghi, M. Jamehdor. 2014. Study the N turnover of legume seed meals for designing a slow release N-fertilizer. *Communication in Soil Science and Plant analysis*. 45:1325-1335.
- 9- Rezayan, A.H., **Sabahi, H.**, Rahmati, A., Maleki, A., Kheirjou, S. 2013. Synthesis of a new class of tetronic acid derivatives: a one-potthree-component condensation reaction between isoquinoline or pyridine and dialkyl acetylenedicarboxylate with tetronic acid. *Monatsh Chem*. 144:1051–1055.
- 10- Veisi, H., Khoshbakht, K., **Sabahi, H.** 2013. A participatory assessment of agro-ecosystem sustainability in Abesard. *International Journal of Agricultural Sustainability*. 11: 52–681.
- 11- **Sabahi, H.**, Veisi H., Soufizadeh. S., Asilan, K.S. 2010. Effect of fertilization system on microbial biomass and mineral N in soil during canola development stages. *Communication in Soil Science and Plant Analysis*. 14: 1665-1673.
- 12- Sabahi, H., Schulz, R., Müller, T., Li, Z. 2009. Nitrogen turnover of legume seed meals as affected by seed meal texture and quality at different temperature. *Archive of Agronomy and Soil Science*. 55: 671-682.
- 13- **Sabahi, H.**, Soufizadeh, S., Mirzaie, T.R. 2009. Zn deficiency in winter oilseed rape (*Brassica napus L.*) is counteracted by N fertilization. *Acta Agriculturae, Plant and Soil science*. 59: 317-325.

3. Papers Published in National Journals

- 1- Balooch, M.R., **Sabahi, H.**; Aminian, H; Nourinejad, S. 2017. Antifungal effects of pomegranate extract intercalated into silicate nanoparticles against blue mold of apple. *Plant Diseases*. 53: 151-164.
- 2- **Sabahi, H.**, Ghashghaee Abdi., Mansourifar, C. 2016. Study on the effects of coated urea-polyphenol as an environmentally friendly fertilizer on growth, yield and N uptake of maize (*Zea mays*). *Agroecology Journal*. 1:1-8.

- 3- Alipour, A; H. Veisi; F. Darijani; **H. Sabahi**; H. Liaghati. 2012. Assessing energy consumption in conventional rice production systems in Mazandaran and Guilan provinces of Iran: A case study in Babolsar and Lahijan. *Agroecology Journal*. 2:73-80.
- 4- Ghaedi, F., **Sabahi, H.**, Kambozia, J., Khoshbakht, K., Aagalikhani, M. 2012. Effects of N fertilization and weed density on availability and uptake of Zn in soil and maize. *Pajouhesh -va- Sazandigi*. 97: 99-104.
- 5- Aidizadeh1, KH., Mahdavi Damghani, A.M., Ebrahimpoor, F., **Sabahi, H.** 2011. Effects of integrated application of biological and chemical fertilizer and application method of biofertilizer on yield and yield components of maize. *Journal of Crop Production*. 4: 21-35.
- 6- **Sabahi, H.**, Takafouyan, J., Mahdavi Damghani, A.M. Liaghati.H. 2011. Effect of integrated application of chemical-biological-organic fertilizers on yield of Canola in saline soil of Qom. *Journal of Agroecology*. 2:287-291
- 7- **Sabahi, H.**, Faizi, M., Veisi, H., Asilan, K.S. 2010. Study on influence of agricultural activity on water quality of Sikan river. *Environmental Science*. 7: 23-30.
- 8- Aidizadeh, Kh., Mahdavi Damghani, A.M. **Sabahi, H.** Soufizadeh, S. 2010. Effect of application of biological fertilizers with chemical fertilizers on corn production in Shoshtar. *Journal of Agroecology*. 2: 292-301.
- 9- Veisi, H., **Sabahi, H.** 2009. Participatory and integrated watershed management and community based organization. *Journal of Environmental Science and Engineering*. 3: 37-44.
- 10- Veisi, H., **Sabahi, H.**, Mohammadi, A.R. 2009. Participation in practice: environmental co-planning in the Seymareh river basin. *Asian Journal of Water, Environment and Pollution*. 6: 57-65.
- 11- Mirzaei talarposhti, R., Kambozia, J., **Sabahi, H.**, Mahdavi Damghani, A.M., 2009. The effect of organic fertilizers on physiochemical of soil and production of tomato. *Field Crop Research of Iran*. 7: 257-268.
- 12- Veisi, H., Mahdavi Damghani, A.M., Liaghati, H., **Sabahi, H.** 2009. Analysis of the causes of non-adopting of IPM technology among rice farmers in Mazandaran and Gilan provinces. *Environmental Science* . 7: 45-56
- 13- **Sabahi, H.**, Ghalavand, A., Modares, S.A.M., and Asgharzadeh, A. 2009. Comparing the effect of integrated and conventional fertilization systems on canola (brassica napus) yield and chemical properties of soil. *Agricultural Science & Technology*. 22: 1-15
- 14- **Sabahi, H.**, Minooei, S., Liaghati, H. 2006. A comparison between summer cover crop and inorganic nitrogen on Garlic yield and the condition of weed. *Environmental Science*. 4:23-32.
- 15- **Sabahi, H.** , Ghalavand.A. 2005. Comparison of Nitrogen uptake, N-use efficiency and N loss at organic, integrated and conventional fertilizer system in canola (Brassica napus L.). *Environmental Science*. 6:13-28.
- 16- **Sabahi, H.**, Rahimian Mashhadi, H. 2001. Effect of foliar spray of Urea pre and post anthesis on yield, yield component and protein of two wheat cultivar. *Journal of Agriculture Sciences*. 3: 13-23

4. Papers Presented at National and International Congresses

- 1- **Sabahi, H.**, Golbashy, M., Allahdadi, I., Nazokdast, H., Hossein, M. 2017. Preparation of nanocomposite of urea-polyphenol-montmorillonite and study its release pattern in laboratory condition. 4th Congress of Nanotechnology in Agriculture. Karaj. Iran .
- 2- **Sabahi, H.**, Balooch, M.R., Aminian, H., Nourinejad, S. 2017. Effect of montmorillonite/pomegranate peel extract nanocomposite on gray mold (*Botrytis cinerea*) in apple fruit. 4th Congress of Nanotechnology in Agriculture. Karaj. Iran .
- 3- Rabiei, M., **Sabahi, H.**, Rezayan, AH. 2014. Using silicate layered nanostructure as a gallic acid carrier. *Nanotechnology Congress & Workshop of nano* (NCWCNN). Tehran. Iran.
- 4- Rabiei, M., **Sabahi, H.**, Rezayan, AH. 2014. Synthesis of Montmorillonite-gallic acid as an applicable cancer drug delivery system. *Nanomedicine in Diagnosis and Treatment of Hard Diseases*.
- 5- **Sabahi, H.**, Golbashy, M., Allahdadi, I. 2014. Designing and Synthesis of nano-fertilizer with capacity of slow release of urea. First e-Conference of New Finding in Environment & Agriculture Ecosystem. Tehran, Iran.
- 6- Golbashy, M., **Sabahi, H.**, Allahdadi, I. 2014. The environmental problems of application of uncoated fertilizers in agriculture. 2014. First e-Conference of New Finding in Environment & Agriculture Ecosystem. Tehran, Iran.
- 7- Rezayan, M.H., **Sabahi, H.** 2011. A novel three-component condensation reaction between isoquinoline or pyridine and dialkyl acetylenedicarboxylate with tetrionic acid. 16th Congress of Chemistry, Hamedan, Iran.
- 8- **Sabahi, H.**, Rezayan, A.H. 2012. Polyphenol and cellulose act as a nitrification inhibitor in different mechanisms. 16th Workshop of Nitrogen. Ireland.
- 9- **Sabahi, H.**, Veisi, H; Liaghati, H. 2010. Effect of organic and inorganic fertilizers on soil microbial biomass and mineral N during canola (*Brassica napus* L.) development stages. *RAMIRAN*. Lisboa. Portugal.
- 10- Veisi, H., **H. Sabahi**. 2010. Sandwatch as a solution for education of sustainable management of coastal lands water resources. *Congress of Management of coastal lands water resources*. Sary. Iran
- 11- Faizi, M., **Sabahi, H.**, Veisi, H. 2010. Study on water quality of Sikan river in aspect of drinking quality. *Congress of Management of coastal lands water resources*. Sary. Iran
- 12- **Sabahi, H.**, Veisi, H., Faizi, M., 2010. Study on variability of water quality of Sikan river. *Congress of Sustainable Development in Water Management*. Mashhad. Iran
- 13- Aidizadeh, Kh., Mahdavi Damghani, A.M. **Sabahi, H.** 2010. Effect of method of application of biological fertilizers on corn production. *11th Congress of Crop Science*. Shahid Beheshti University. Tehran.
- 14- Ghaedi, F., **Sabahi, H.**, Kambouzia, J., Khoshbakt, K., Aghaalikani, M. 2010. Effect of nitrogen and weed density on availability and uptake of Zn in corn. *11th Congress of Crop Science*. Shahid Beheshti University. Tehran.
- 15- **Sabahi, H.**, Veisi, H., Faizi, M. 2009. Study on the variations of water quality of Sikan river influenced by agriculture wastewater. *Tropentag*. Germany .
- 16- **Sabahi, H.**, Li, Z ., Schulz, R., Müller. 2009. Effect of chemical composition on nitrogen mineralization from legume seed meals at different temperatures. *16th Workshop of Nitrogen*, Turin, Italy .

- 17- Li, Z., **Sabahi, H.**, Schulz, R., Müller, T. 2009. Inkubationsversuche zum Einfluss von Sorte und Textur auf den Umsatz von Lupinenkörnerschroten im Boden bei unterschiedlichen Temperaturen. *10th Scientific Conference on Organic Agriculture*. Zurich. Swiss.
- 18- **Sabahi, H.**, Veisi, H. 2008. Soil health : managing the biotic and abiotic components of soil health. *International Congress of Environmental Research* .Goa. India.
- 19-**Sabahi, H.**, Soufizadeh, H. 2008. The effect of different fertilization systems on content of some micro and macro nutrients in soil and seed of oilseed rape (*Brassica napus* L.). *Eurosoil Congress*. Vienna. Austria.
- 20-**Sabahi, H.** 2007. Study on physicochemical and biological properties of soil in different fertilizations systems. *2th Agroecology Congress*. Gorgan. Iran.
- 21-**Sabahi, H.** Liaghati H. 2007. Study on effects of integrated and conventional fertilization systems on chemical properties of soil and rapeseed yield. *Tropentag*. Kassel. Germany.
- 22-Müller, T., Riehle, J., Schlegel, I., Li, Z., Von Schenck zu Schweinsberg-Mickan, M., **Sabahi, H.**, Schulz, R. 2007. Legume seed meals and other plant based fertilizers in organic vegetable production. *9th Congress on Organic Farming*. Stuttgart. Germany.
- 23-**Sabahi, H.**, Ghalavand, A. 2006. Effect of manure, inorganic fertilizer and manure-fertilizer combined application on N losses, N-use efficiency and yield of oilseed rape (*Brassica napus* L.). *Tropentag: Conference on international agricultural research for development*. Bonn. Germany.
- 24-**Sabahi, H.** 2006. Comparison of chemical properties of soil and seed yield of oilseed rape at organic, integrated and conventional fertilizer system. *The 9th Iranian Congress of Crop Production and Plant Breeding*. Tehran. Iran.
- 25-**Sabahi, H.**, Ghalavand, A. 2006. Comparison of Nitrogen uptake, N-use efficiency and N loss at organic, integrated and conventional fertilizer system in canola (*Brassica napus* L.). *The 9th Iranian Congress of Crop Production and Plant Breeding*. Tehran. Iran.
- 26- Takafouyan, J., **Sabahi, H.**, Mahdavi Damghani, A.M. Liaghati, H. 2006. Effect of integrated application of chemical-biological-organic fertilizers on nitrogen and phosphorus uptake and yield of Canola in salin soils of Qom. *11th Congress of Crop Science*. Shahid Beheshti University. Tehran.
- 27-**Sabahi, H.** 2002. Response of Korasan wheat cultivars to water stress. *The First International Wheat Congress*. Tehran. Iran.
- 28-Rahimian Mashhadi and **Sabahi, H.**, 1996. Effect of pre and post anthesis foliar spraying of urea on yield, yield components and protein of two wheat cultivars. *2nd International Crop Science Congress*, New Delhi, India.
- 29-Rahimian Mashhadi, H and **Sabahi, H.** 1996. Study on effect of foliar spraying of urea on nitrogen and dry matter remobilization of two wheat cultivars at Mashhad region . *The 4th Iranian Congress of Crop Production and Plant Breeding*. Isfahan, Iran

5. Completed and Current Research Projects Participated

- 1- The IFS project with number C/5026-1. 2015. *International Foundation for Science, Sweden*. Finished.
- 2- *The scholarship in Hohenheim university, Stuttgart, Germany*. 2006. Nitrogen turnover of legume seed meals as affected by seed meal texture and quality at different temperature.
- 3- Study on the efficacy of integrated application of biological fertilizers with manure under different climatic conditions. Shahid Beheshti University

- 4- Effects of integrated use of organic and inorganic fertilizers with plant- growth-promoting- rhizobacteria (PGPR) on soil nutrient availability and quantitative and qualitative yield of wheat. Shahid Beheshti University
- 5- Effect of integrated and conventional fertilizer systems on the soil health and weed population at garlic (*Allium sativum* .L) organic farming. Shahid Beheshti University.

6. Patent

- 1- Synthesis of micro-composite of urea-polyphenol as N targeted-release urea. *Patent* (Accepted on 09.05.2015, International Classification: C08B; A01N).

7. Published Books

- 1- Rezayan, AM., Mohamadnejad, J., **Sabahi, H**, 2012. Principles and techniques of biochemistry and molecular biology. Etminan Publication.
- 2- Veisi, H., **Sabahi. H.**, Khoshbakht,K., Mahmoudi, H. 2012. Sustainable management of agroecosystems. Shahid Beheshti University.
- 3- **Sabahi,H.**, Mirzaei Talarposhti,R., Farzaneh, M., Mahdavi Damghani, M. 2011. Handbook of microbial fertilizers. Shahid Beheshti University Publication
- 4- Koocheci, A.R., Nasirimahalati,M., Rezvani,P and **Sabahi,H**. 2003. Global climate change and crop production. Ferdowsi university of Mashhad publication.

8. Teaching for B.Sc. and M.Sc. Students

Fundamentals of Nanobiomimetics (M.Sc. of Nanobiomimetic)
 Development of biomimetic nanomaterial (M.Sc. of Nanobiomimetic)
 Biomimetic nanofabrication (M.Sc. of Nanobiomimetic)
 Nanobiotechnology applications (M.Sc. of Nanobiotechnology)
 Design of experiments and statistical analysis of data (M.Sc. of Nanobiotechnology)
 Biomaterials (M.Sc. of Nanobiotechnology)
 Applications of nanotechnology in life science (Ph.D of Nanobiotechnology)
 Self-assembly in biological systems (Ph.D of Nanobiotechnology)
 Bioengineering (Ph.D of Nanobiotechnology)
 Soil fertility and biofertilizers (M.Sc. of Agroecology)

9. Supervisor of Ph.D and master theses in Nanobiotechnology Group.

- 1-Fadai, N. Sabahi, H. 2017. ***Increasing anticancer activity of pomegranate fruit powder through milling in nano scale.*** (MSc. Thesis). University of Tehran. Continued.
- 2- Kazemi, Z. Sabahi, H. 2017. ***The size effect of curcumin-micoalgae powder in nano scale on improvement of its physicochemical and therapeutic characteristics*** (MSc. Thesis). University of Tehran. Continued.
- 3-Ghanad Sabzevari, AR., Sabahi, H. 2016. ***Loading anti-cancer plant metabolites into montmorillonite nanoparticles in order to elevating the efficiency and reducing the side effects of HCC therapy through combination therapy.*** (Ph.D Thesis). University of Tehran. Continued.
- 4- Rutakhli, A., Sabahi, H. 2016. ***Encapsulation of nettle polyphenols in montmorillonite as a drug delivery system.*** (MSc. Thesis). University of Tehran. Finished.

- 5-Khorrami, M., Sabahi, H. 2015. *Encapsulation of plant polyphenols in kaolin as a drug delivery system* (MSc. Thesis). University of Tehran. Finished.
- 6-Jafari, Y., Sabahi, H. 2015. *Encapsulation of plant polyphenol within plant cell as drug delivery system* (MSc. Thesis). University of Tehran. Finished.
- 7- Rabiei, M., Sabahi, H. 2014. *Synthesis of the montmorillonite-polyphenol based nanostructure as a drug delivery system* (MSc. Thesis). University of Tehran. Finished.
- 8- Golbashy, M. Sabahi, H. 2013. *Preparation of Nano-Bio-Composite System for slow release of Urea*. University of Tehran (Ph.D Thesis). University of Tehran. Finished.

10. Supervisor of master theses in Shahid Beheshti University

- 1- Gaedi F., Sabahi H. and Kambozia J. 2009. Effects of N fertilization and redroot pigweed density on availability and uptake of Zn and corn yield. Shahid Beheshti University.
- 2- Al-Ali, N., Sabahi, H. and Mahdavi Damghani, A.M. 2010. Energy use efficiency of an Olive grove in Qom: implication for sustainable agriculture. Shahid Beheshti University.
- 3- Najafi Saatlu M., Sabahi, H. and Mahdavi Damghani, A.M. 2010. Study the effect of biofertilizers on quality and quantity of Osmium basilicum. 2010. Shahid Beheshti University.
- 4- Takafouyan J., Sabahi, H. and Mahdavi Damghani, A.M. 2010. Evaluation of ecological, physiological and economical aspects of integrated fertilizer application in canola. Shahid Beheshti University.

11- Advisor of master theses in Shahid Beheshti University

- 1- Moinoddini, SH., Kambouzia, J., Zand, E., Mahdavi Damghani, A.M., and Sabahi, H. 2010. Risk assessment of authorized insecticides in Iran. Shahid Beheshti University.
- 2- Alipour Jahanghiri, A., Veisi, H. and Sabahi, H. 2010. Assessment of economic – social and ecological impact assessment of IPM/FFS groups. Shahid Beheshti University.
- 3- Aidizadeh, K., Mahdavi Damghani, A.M., and Sabahi, H. 2010. Effect of integrated application of biological and chemical fertilizers and application method of biofertilizer on yield and yield components of maize. Shahid Beheshti University.
- 4- Mansouri H., Zand, E., and Sabahi, H. 2009. Effect of current herbicides residues on rotational crops of wheat and soil microbial respiration. Shahid Beheshti University.
- 5- Mohammadi, V., Kambouzia, J., Zand, E., and Sabahi, H., Soufizadeh, S. 2011. Investigating the ecophysiological aspects of competition between corn and redroot pigweed or millet. 2011. Shahid Beheshti University.