

## **C.V. of Prof. Hesham M. Kamal**

- Date of birth: 21/8/1957
- Qualifications: B.Sc. of geology, Fac. of Science, Al Azhar Univ. 1980, Good Degree.
- Joined Nuclear Materials Authority (NMA) in 1982.
- The first position was as a field geologist in the North Eastern Desert Development Department, contributing most of the field studies and mining works at El-Missikat and El-Eredyia exploratory mines (1982-1984).
- From November 1984- July 2006, I have been working as a geochemist in the Semi-Pilot Plant Department, Production Sector.
- M. Sc. degree of Science (1995) Cairo University, in geology entitled "Studies on the distribution and recovery of uranium/molybdenum from their bearing minerals from Gabal Gattar area, Eastern Desert, Egypt".
- Assistant lecturer of geochemistry (1996).
- Ph. D. degree of Science (2004) Cairo University entitled "Mineralogical, geochemical studies and extraction of U, Th and REE from their bearing igneous rocks, southwest Aswan area, Western Desert, Egypt" and a lecturer post in geology 14/12/2004.
- In 2006 I have joined the Yellow Cake Production Project (G. Gattar).

### **Published Papers**

- Kamal, H.M., 1996. Recovery of Uranium and Molybdenum from Gebel Gattar Granite, Eastern Desert, Egypt". The 6<sup>th</sup> Conf. Nucl. Sci. and Appl. Cairo, III, pp. 463.
- Mahdy, M.A., El-Dougdoug, A. and Kamal, H.M."Extraction of U, Th, Y and REE from El Garra El Hamra ore concentrate". The 19<sup>th</sup> International Mining Petroleum and Metallurgical Engineering Conference. Cairo Univ. CD Code: MET. 60
- Mahdy, M.A., El Dougdoug, A. and Kamal, H.M., 2005. Contribution to the Geochemical Characteristics and Economic Minerals Petrogenesis of El Garra El Hamra Syenitic Intrusion. The 4<sup>th</sup> Int. Conf. Geol. Africa, Assuit Univ., Egypt, 2, 401-413.
- Abdel Motalib, A., El-Dougdoug, A. and Kamal, H.M., 2005. Post Cretaceous-Eocene Syenitic Intrusion of El Garra El Hamra Area, south Western Desert, Egypt, The 4<sup>th</sup> Int. Conf. Geol. Africa, Assuit Univ., Egypt, 2, 445-457.

- Ismail, A.A. and Kamal, H.M., 2007. Integration Appraisal of Airborne Gamma Ray Spectrometric and Geochemical Data for El Garra El Hamra, South Western Desert, Egypt. Int. Symp. Geoph., Tanta Univ., Egypt, 5,
- "Studies on Production of High Purity Grade Phosphoric Acid by Solvent extraction from Wet Process Phosphoric Acid" Abdel Khalek, Hesham M. Kamal, Ahmed F. Abdel Magied and Kandiel M. Kandiel. Arab Journal of Nuclear Sciences and Applications. A periodical published by The Egyptian Society of Nuclear Sciences and Applications. 13. 1. 2008.
- "Using Environmental Scanning Electron Microscopy (ESEM) and Energy Dispersive Analytical X-Ray Unit (EDX), in the Identification of Important Minerals in the Younger Granites of Gabal El Muielha Area, Central Eastern Desert, Egypt" H. M. Kamal, J. M. Samaan and M. Journal of Applied Geophysics by the Egyptian Society of Applied Petrophysics (ESAP), 8<sup>th</sup> volume, March 2008.
- "Upgrading The Commercial Phosphoric Acid Using the Cross Linked Starch" M. Y. El Kady, E. M. El Sheikh and H. M. Kamal. Egyptian Magazine of Analytical Chemistry, Vol. 18, pp. 72-79 (2009).
- "Recovery of high grade phosphoric acid from wet process acid by solvent extraction with aliphatic alcohols" M.I. Amin, , M.M. Alia, H.M. Kamala, A.M. Youssef, M.A. Akl. Hydrometallurgy 105 (2010) 115–119
- "Bioleaching of some heavy metals from gibbsite-bearing shale by *Aspergillusniger* and *Aspergillus fumigates*"\* El Mougith, A.A.E.; \*\* El-Aassy, I. E.; Mahmoud, Kh. F.; Kamal, H. M. and Sedek, H. A.\**Faculty of Science, Zagazig University,* \*\* *Nuclear Materials Authority, Egypt* (Journal of AssiutUnive.
- "Microbial Leaching of Some Valuable Elements from Egyptian Phosphate Rock" <sup>1</sup>Hesham M. Kamal<sup>2</sup>, Heba M. A. Mahdy<sup>1</sup>, Raifa A. Hassanein<sup>2</sup>, Khalid F. Mahmoud<sup>1</sup>, and Mohamed A. Abouzeid<sup>3</sup>. ISSN 2314-5609 Nuclear Sciences Scientific Journal, vol. 1, p 55-67 2012.
- “Extraction of gadolinium from El-Garra El-Hamra rare-earth cake, South Western Desert, Egypt”[Hesham M. Kamal](#), [Khalid F.](#)

Mahmoud, Mohamed R. Shehata. *Journal of Radioanalytical and Nuclear Chemistry*,(2014) Volume 299, Issue 3 , pp 1231-1240

"Pre-concentration of chitosan from the shrimp shells and its application for pre-concentration of uranium after cross-linking with epichlorohydrin" Ahmed M. Motawie<sup>a</sup>, Khalid F. Mahmoud <sup>b</sup>, Abdallah A. El-Sawyc, Hesham M. Kamal <sup>b</sup>, Hassan Hefnia, Huda AmerIbrahiemb,\* *Egyptian Journal of Petroleum* (2014) 23, 221–228.

“Decreasing Iron Content from Egyptian Wet Process Phosphoric Acid using Organic Solvent Extraction” M. I. Amin, H. M. Kamal and M. M. Gouda, Nuclear Materials Authority, Cairo, Egypt. *International Journal of Advanced Research* (2014), Vol.2, Issue 1, 1019-1026

“Recovery of Lanthanides Cake from Industrial Phosphogypsum Waste” Hesham M. Kamal, Mohamed M. Fawzy. Nuclear Materials Authority, El Maadi, Cairo, Egypt” *American Journal of Science and Technology* 2015; 2(6): 335-345

“Extraction of Uranium from the Radioactive Pegmatite Recorded at Central Eastern Desert, Egypt” Hesham M. Kamal *Nuclear Materials authority, Cairo, Egypt IOSR Journal of Applied Chemistry (IOSR-JAC) e-ISSN: 2278-5736. Volume 9, Issue 6 Ver. I (Jun. 2016), PP 40-48*

“Leaching Study of Lanthanides from its Mineralized Rocks at Gebel Gattar, Eastern Desert”, Egypt Hesham M. Kamal Nuclear Materials Authority, Cairo, Egypt *International Journal of Research in Engineering and Science (IJRES) ISSN (Online): 2320-9364, ISSN (Print): 2320-9356 Volume 4 Issue 6 | June. 2016 | PP.01-10*

“Uranium stripping from loaded synergic solvent by sodium carbonate using pulsed column” M.F.El Shahat<sup>2</sup>, H.M.Kamal<sup>2</sup>, R.A. Gazalla<sup>2</sup>, W.M.Morsy<sup>1\*</sup> <sup>1</sup>Nuclear Materials Authority, P.O. Box 530 El-Maadi, Cairo, (EGYPT) <sup>2</sup>Faculty of Science, Inorg. Chem. Dept., Ain Shams University, Cairo, (EGYPT) *chemical technology An Indian Journal Volume 11 Issue 2 Review CTAIJ 11(2) 2016 [065-072] ISSN : 0974 - 7443*

### **Internal Reports**

1. "Preparation of High Purity Uranyl Nitrate from a Crude Sodium Di-Uranate Produced by Gattar Heap

- Leaching Pilot Plant" Internal Report (NMA) September 2007.
2. "Heap Leaching Process of Low Grade Uraniferous Qattar Granite (Run – 5)", August 2007.
  3. "Qattar Yellow Cake Production Unit (Run – 6)" , July 2008.
  4. "Qattar Yellow Cake Production Unit (Run – 8)", July 2010.
  5. "Qattar Yellow Cake Production Unit (Run-9)", July 2011.
  6. "Preparation of high pure uranium trioxide from crude yellow cake", December 2011.
  7. "Preparation of Pure Uranium Concentrates from Gattar Low Grade Yellow Cake", June 2013.

#### **Training Courses:**

1. Radioactive waste treatment and transport arranged by Arabic atomic energy Authority and Atomic Energy Authority of Egypt, 30 Oct. – 17 November 1993, Cairo, Egypt.
2. Nuclear techniques on mineral exploration arranged IAEA, 27 Feb. -17 Mar. 1995. Lusaka, Zambia.
3. Corrosion of iron structures and pipe lines and its protection arranged by Egyptian society Authority of metals corrosion and its protection, 1997.
4. Radioactive protection arranged by (NMA), 22/3/2009 – 2/4/2009.
5. Attending the Training Meeting on Effective Regulatory & Environmental Management of Uranium Production, arranged by the International Atomic Energy Agency (IAEA), 13 – 17 August 2012, at Darwin, Australia.

#### **Thesis Supervision:**

1. "Sulubilization of some valuable elements from phosphate ores using certain microorganisms and potentiality of their extraction by some plant waste" **Heba M. Abdel HakamMahdy** M. Sc. Plant Dep. Ain Shams Univ. **2011**

2. "Studies on the efficiency of Gadolinium element extraction from its bearing rock concentrate from El Garra El Hamra area, south Western Desert, Egypt" **Hala Ahmed M. Mohamed** M. Sc. Chemistry Dep. Cairo Univ. **2012**
3. "Fungal leaching of some heavy metals from soil sediments south western Sinai, Egypt" **Heba Atia Sedeik El Sayed** M. Sc. Microbiology Dep. Zagazig Univ. **2012**
4. "An economic study on the removal of uranium from liquid wastes using one of the agricultural waste" **Mohamed Mohamed Badawy** M.Sc. Faculty of Agriculture Benha Univ. Under preparation.
5. "Pre-concentration and purification of uranium from its pregnant liquors by synthetic resins" **Huda Amer Ibrahim** M. Sc. Chemistry Dep. Benha Univ. **2014**
6. "Determination and extraction of Hafnium and some other economic elements from petroleum ash" **Abdalah Mahrous Abd El Hameed** Ph. D. Chemistry Dep. Menuofiya Univ. **2014**
7. "Studies on the leaching and recovery of uranium and some associated economic elements from the mineralized shear zone of Jabal El Missikate, Eastern Desert, Egypt" **Lamees Serag Edin Awad** M.Sc. Chemistry Dep. Benha Univ. Under preparation.
8. "Recovery of Uranium and REEs from the Radioactive Playa Sediments of Atmur El Kibiesh area, south Western Desert, Egypt" **Hala Ahmed M. Mohamed** Ph. D. Chemistry Dep. Cairo Univ. Under preparation.
9. "Phyco-Sorption of Uranium by Algae from its Different Processing Effluents" **Heba M. Abdel Hakam Mahdy** Ph. D. Plant Dep. Ain Shams Univ. Under preparation.
10. "Application of the pulsed –column technology in uranium recovery from Gattar uranium ore concentrate, Eastern Desert, Egypt" **Waled Mohamed Morsy** Ph. D. Chemistry Dep. Faculty of Science, Ain Shams University.