Métodos Formales en la

Ingeniería de Software

Referencias

Especificación Formal y Validación de un Sistema de Detección de Metales Pesados en el Agua

Integrantes

María Fernanda Adira Pinazo Vera

Aldo Ray Vasquez Lopez

Josué Carlos Alberto Ramos Suyoc

Juan Alexis Quispe Luque

Fernando Perez Del Castillo

Semestre VI

2024

I. Referencias del Artículo

1. *Dispositivo detector de mercurio en el agua*. **Autor:** Oscar Andrés Torres Llano. **Enlace:**

https://repositorio.uniandes.edu.co/entities/publication/caeeb245-45fa-4dd1-a935-e48e328850dc

2. *Electrochemical detection of heavy metal ions in water.* **Autores:** Qi Ding, Chen Li, Haijun Wang, Chuanlai Xu, Hua Kuang. **Enlace:**

https://pubs.rsc.org/en/content/articlelanding/2021/cc/d1cc00983d

3. *Armonización de los estándares de agua potable en las Américas.* **Autor:** Paola Truque. **Enlace:**

https://www.oas.org/DSD/publications/classifications/Armoniz.EstandaresAguaPotable.pdf

4. *Health Impacts of Heavy Metals Exposure.* **Autores:** Jason Matthews, Sarah Brown. **Enlace:**

https://www.sciencedirect.com/science/article/pii/S1018364722000465

5. *Toxic heavy metals: impact on the environment and human health, and treatment with conducting organic polymers, a review.* **Autores:** Mohamed Lamine Sall, Abdou Karim Diagne Diaw, Diariatou Gningue-Sall, Snezana Efremova Aaron & Jean-Jacques Aaron. **Enlace:**

https://link.springer.com/article/10.1007/s11356-020-09354-3

6. *Cadmium toxicity and treatment: An update.* **Autores:** Mehrdad Rafati Rahimzadeh, Mehravar Rafati Rahimzadeh, Sohrab Kazemi, Ali-akbar Moghadamnia. **Enlace:**

https://pmc.ncbi.nlm.nih.gov/articles/PMC5596182/

7. *Arsenic Exposure and Toxicology: A Historical Perspective.* **Autores:** Michael F Hughes, Barbara D Beck, Yu Chen, Ari S Lewis, David J Thomas. **Enlace:**

https://pmc.ncbi.nlm.nih.gov/articles/PMC3179678/

8. *Adverse Human Health Effects of Chromium by Exposure Route: A Comprehensive Review Based on Toxicogenomic Approach.* **Autores:** Dong Yeop Shin, Sang Min Lee, Yujin Jang, Jun Lee, Cheol Min Lee, Eun-Min Cho, Young Rok Seo. **Enlace:**

https://pmc.ncbi.nlm.nih.gov/articles/PMC9963995/

9. *Modelling Systems: Practical Tools and Techniques in Software Development.* **Autores:** John Fitzgerald, Peter Gorm Larsen. **Enlace:**

https://books.google.com.pe/books/about/Modelling_Systems.html?id=7LY8AAAAIAAJ&redir_esc=y

10. *Using Z: Specification, Refinement, and Proof.* **Autores:** Jim Woodcock, Jim Davies. **Enlace:**

https://books.google.com.pe/books/about/Using_Z.html?id=ua1QAAAAMAAJ&redir_esc=y

11. *Real-Time Wireless Detection of Heavy Metal Ions Using a Self-Powered Triboelectric Nanosensor Integrated with an Autonomous Thermoelectric Generator-Powered Robotic System.* **Autores:** Yan-Tsz Huang, Arshad Khan, Anindita Ganguly, Kuldeep Kaswan, Sreerag Suresh, Yu-Ying Cheng, Kuan-Ming Lee, Jui-Han Yu, Zong-Hong Lin. **Enlace:**

https://pubmed.ncbi.nlm.nih.gov/39520087/

12. *Advances in Portable Heavy Metal Ion Sensors.* **Autores:** Tao Hu,Qingteng Lai,Wen Fan,Yanke Zhang andZhengchun Liu. **Enlace:**

https://www.mdpi.com/1424-8220/23/8/4125

13. *Nanomaterials-Based Ion-Imprinted Electrochemical Sensors for Heavy Metal Ions Detection: A Review.* **Autores:** Liangyun Yu, Liangju Sun, Qi Zhang, Yawen Zhou, Jingjing Zhang, Bairen Yang, Baocai Xu, andQin Xu. **Enlace:**

https://www.mdpi.com/2079-6374/12/12/1096

14. *Electrochemical detection of lead and cadmium ions in water by sensors based on modified track-etched membranes.* **Autores:** Nurdaulet Zhumanazar, Ilya V. Korolkov, Arman B. Yeszhanov, Dmitriy I. Shlimas, Maxim V. Zdorovets. **Enlace:**

https://www.sciencedirect.com/science/article/abs/pii/S0924424722007294

15. *Machine Learning-Based Heavy Metal Ion Detection Using Surface-Enhanced Raman Spectroscopy.* **Autores:** Seongyong Park, Jaeseok Lee, Shujaat Khan, Abdul Wahab, Minseok Kim. **Enlace:**

https://www.mdpi.com/1424-8220/22/2/596

16. *Wireless Microfluidic Sensor for Metal Ion Detection in Water.* **Autores:** Yu Liang, Mingsheng Ma, Faqiang Zhang, Feng Liu, Tan Lu, Zhifu Liu, Yongxiang Li. **Enlace:**

https://pmc.ncbi.nlm.nih.gov/articles/PMC8028120/

17. *Heavy metals analysis and quality assessment in drinking water – Khorramabad city, Iran.* **Autores:** Mansour Ghaderpoori, Bahram Kamarehie, Ali Jafari, Afshin Ghaderpoury, Mohammadamin Karami. **Enlace:**

https://pmc.ncbi.nlm.nih.gov/articles/PMC5847489/

18. *Biosensor for heavy metals detection in wastewater: A review.* **Autores:** Karthik Velusamy, Selvakumar Periyasamy, P. Senthil Kumar, Gayathri Rangasamy, J. Mercy Nisha Pauline, Pradeep Ramaraju, Sneka Mohanasundaram, Dai-Viet Nguyen Vo. **Enlace:**

https://www.sciencedirect.com/science/article/abs/pii/S0278691522005051

19. *Fluorescent Sensors for Measuring Metal Ions in Living Systems.* **Autores:** Kyle P. Carter, Alexandra M. Young, Amy E. Palmer. **Enlace:**

https://pubs.acs.org/doi/10.1021/cr400546e

20. *Heavy Metals Removal from Water by Efficient Adsorbents.* **Autores:** Muhammad Zaim Anaqi Zaimee, Mohd Sani Sarjadi, Md Lutfor Rahman. **Enlace:**

https://www.mdpi.com/2073-4441/13/19/2659