

# Curriculum Vitae



| <b>BUTIR-BUTIR PERIBADI</b> ( <i>Personal Details</i> )                          |   |  |  |
|--|---|--|--|
| Nama Penuh ( <i>Full Name</i> )  | Shahrul Ainliah Alang Ahmad                       |  | Gelaran ( <i>Title</i> ):<br>Associate Professor |
| No. MyKad / No. Pasport<br>( <i>Mykad No. / Passport No.</i> )<br>821107-10-5514 | Warganegara<br>( <i>Citizenship</i> )<br>Malaysia | Bangsa<br>( <i>Race</i> )<br>Malay       | Jantina ( <i>Gender</i> )<br>Female              |
| Jawatan ( <i>Designation</i> )   | Prof. Madya                                       | Tarikh Lahir<br>( <i>Date of Birth</i> ) | 07/11/1982                                       |

| Alamat Semasa ( <i>Current Address</i> )  | Jabatan/Fakulti<br>( <i>Department/Faculty</i> )  | E-mel dan URL ( <i>E-mail Address and URL</i> )                      |
|---|---|--|
| Jabatan Kimia, Fakulti Sains,<br>Universiti Putra Malaysia<br>43400 Serdang, Selangor<br><br>Tel: +603-92741508 | Jabatan Kimia, Fakulti Sains,<br>Universiti Putra Malaysia<br>43400 Serdang, Selangor<br><br>Tel: +603-89466805<br>Fax: +603-89435380 | E-mail: ainliah@<br>upm.edu.my<br><br>URL:<br><br>H/P: +6013-2402100 |

| <b>KELAYAKAN AKADEMIK</b> ( <i>Academic Qualification</i> )               |   |                                   |  |
|---|---|-----------------------------------|--|
| Nama Sijil / Kelayakan<br>( <i>Certificate / Qualification obtained</i> ) | Nama Sekolah Institusi<br>( <i>Name of School / Institution</i> ) | Tahun<br>( <i>Year obtained</i> ) | Bidang pengkhusususan<br>( <i>Area of Specialization</i> ) |
| Bachelor of Science (Hons)  | Universiti Putra Malaysia   | 2005                              | Industrial Chemistry                                       |
| PhD   | University of Sheffield   | 2009                              | Nanoscale Analytical Chemistry                             |
| Postdoctoral  | University of Sheffield   | 2009-2010                         | Physical and Analytical Chemistry                          |
| Postdoctoral  | University of New South Wales                                     | 2013-2014                         | Surface Modification and Electrochemistry                  |

| <b>KEAHLIAN BADAN PROFESIONAL SEMASA</b> ( <i>Current Professional Membership</i> ) |  |   |                     |
|---|--|---|---------------------|
| Nama badan profesional<br><i>Name of Professional body</i>                          | Tempoh Keahlian<br><i>Duration of Membership (From – To)</i> | Jenis Keahlian<br><i>Type of Membership</i> | <i>Peranan Role</i> |
| Royal Society of Chemistry  | 2017-2018  | Fellow                                      |                     |
| Kelab Kimia   | 2011-2013  | Coordinator                                 | As an advisor       |
| Persatuan Biosensor Malaysia  | 2017-2018  | Member                                      |                     |

| PROJEK PENYELIDIKAN SEMASA DAN TERDAHULU ( <i>Current and Past Research Project</i> ) |  |                        |      |                |                       |
|---|--|------------------------|------|----------------|-----------------------|
| Project No.   | Project Title  | Role                   | Year | Source of fund | Status                |
| British Council Newton Fund (216196834)   | Harnessing Nanotechnology for Robust and Sensitive Tropical Disease Detection in a Malaysian Setting   | Partner Main Principal | 2016 | £149,933       | Completed (2016-2018) |
| FRGS/1/2017/ST G01/UPM/02/4   | Surface Modification of Mn-Doped PbS Quantum Dots with Calixarene for Removal of Polyaromatic Hydrocarbons (PAHs) from Wastewater  | Project leader         | 2017 | RM95050        | On-going 2017-2019    |
| UPM/700-2/1/GPB/2017/955 7800   | Electrochemical Detection of Polycyclic Aromatic Hydrocarbons (PAHs) Using Calixarene-Functionalized Graphene Oxide Sensor   | Project leader         | 2017 | RM77,600       | On-going 2017-2019    |
| 9580900   | Electrochemical detection of uric acid in biological samples   | Project leader         | 2017 | RM 177,800     | On-going 2017-2020    |
|   | Enhancing quantum Yield emission of PbS/MnS core shell quantum dots for functional contrast agent prepared via cation exchange mechanism                                     | Member                 | 2017 | RM50,000       | On-going 2017-2019    |
| GP-IPS/2018/9647600   | Functionalization Magnetite Lead Sulphide (PbS) quantum dots with 4-tertbutylcalixarene for polyaromatic hydrocarbon removal   | Project leader         | 2018 | RM25,000       | On-going 2018-2020    |
| GP-IPS/2018/9647500   | Synthesis of Calixarene-polurethane nanofiber for heavy metal removal  | Project leader         | 2018 | RM22,000       | On-going 2018-2020    |
| GP-IPS/2018/9642700   | Surface modification of screen printed carbon electrode with calixarene-graphene oxide Nanocomposite for electrochemical detection of polycyclic aromatic hydrocarbon (PAHs) | Project leader         | 2018 | RM25,000       | completed 2018-2020   |
| UPM/800-4/11/MRUN/2018 /5539230   | Immuno Based Biosensors system for ultrasensitive non invasive and affordable detection of Mycobacterium Tuberculosis (TB) for future home test kit                          | Member                 | 2018 | 467,500        | On-going 2018-2020    |
| PRGS/1/2018/ST G01/UPM/02/1   | Development of Electrochemical Sensor Based on Micro-Patterned Calixarene Electrode for Heavy Metal Detection  | Project leader         | 2019 | RM99,000       | 2019-2021             |

| <b>SENARAI PENERBITAN</b> ( <i>Publication</i> )<br><i>(List of publications – author (s), title, journal, volume, page and year published)</i> |   | Total Number of Publication |
|---|---|-----------------------------|
| <i>Journal</i>  | <p>1) Aziz, S.F.N.A., Zawawi, R.M. and Ahmad, S.A.A.A. <b>An Electrochemical Sensing Platform for the Detection of Lead Ions Based on Dicarboxyl-Calix[4]arene</b>, <i>Electroanalysis</i>, 2018, 30,1-11</p> <p>2) Talib, N.A.A, Salam, F.; Yusof, N.A.; Ahmad, S.A.A, Azid, M.Z., Mirad, R. and Sulaiman, Y., 2018 <b>Enhancing a clenbuterol immunosensor based on poly(3,4-ethylenedioxythiophene)/multi-walled carbon nanotube performance using response surface methodology</b> <i>RSC Adv.</i>,2018,8,15522-15532</p> <p>3) Ahmad, S.A.A.A, Ciampi, S., Parker, S. G., Goncales, V.R. and Gooding, J.J. <b>Forming Ferrocenyl Self-Assembled Monolayers on Si(100) Electrodes with Different Alkyl Chain Lengths for Electron Transfer Studies</b> <i>ChemElectroChem</i>, 2019, 6, 211-212</p> <p>4) Zainal, P. N., Ahmad, S.A.A. and Ngee, L.H. <b>Surface Modification of Screen-Printed Carbon Electrode (SPCE) with Calixarene-Functionalized Electrochemically Reduced Graphene Oxide (ERGO/C4) in the Electrochemical Detection of Anthracene</b>, <i>Journal of the Electrochemical Society</i>, 2019, 166(2): B110-B116</p> <p>5) Rani, E. Mohshim, S.A., Ahmad, M.Z., Goodacre, R., Ahmad, S.A.A. &amp; Wong, L.S. <b>Polymer Pen Lithography-Fabricated DNA Arrays for Highly Sensitive and Selective Detection of Unamplified Ganoderma Boninense DNA</b>, <i>Polymer</i>, 2019, 11, 561</p> <p>6) Zaini, M.S., Kamarudin, M. A., Chi, J.L.Y., Alang Ahmad, S.A. and Mohmad, A. R. <b>Temperature and Power Dependence Of Photoluminescence In PbS Quantum Dots Nanoparticles</b>, <i>Sains Malaysiana</i>, 2019, 6,1281-1288.</p> <p>7) M. A. Jamilan, J. Abdullah, S. A. Alang Ahmad and M. F. Md Noh <b>Voltammetric determination of iodide in iodized table salt using cetyltrimethylammonium bromide as ion-pairing</b>, <i>J Food Sci Technol</i>, 2019, 56, 3846-3853.</p> <p>8) Lah, Z. M. A., Ahmad, S.A.A., Zaini, M. S., Kamarudin, M. A <b>An Electrochemical Sandwich Immunosensor for the Detection of HER2 using Antibody-Conjugated PbS Quantum Dot as a</b></p> |                             |

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|                         | <p><b>label</b>, Journal of Pharmaceutical and Biomedical Analysis, 2019, 9, 608-617.</p> <p>9) Mohamed Azman, N. Z.; Zainal, P.N.S. and Alang Ahmad, S. A. <b>Enhancement the electrochemical conductivity of a modified reduced graphene oxide/calixarene screen-printed electrode using response surface methodology</b>, Plos One, 2020, 15(6): e0234148.</p> <p>10) Rani, E., Mohshim, S.A., Yusof, N.H. et al. <b>Sensitive and selective detection of DNA fragments associated with Ganoderma boninense by DNA-nanoparticle conjugate hybridisation</b>. J. Mater. Sci. 55, 14965-14979 (2020).</p> <p>11) Zaini, M. S; Liew, J. Y. C.; Alang Ahmad, S. A.; Mohmad, A. R. and Ahmad Kamarudin, M. <b>Quantum Confinement Effect and Photoenhancement of Photoluminescence of PbS and PbS/MnS Quantum Dots</b>, Appl. Sci, 2020, 10(18), 6282</p> <p>12) Zainal, P.N.S.; Alang Ahmad, S. A.; Rosly, Z. and Aziz, S.F.N.A., <b>Polycyclic Aromatic Hydrocarbons: Occurrence, Electroanalysis, Challenges, and Future Outlooks</b>, Critical Reviews in Analytical Chemistry, 2020</p> <p>13) Zaini, M. S; Liew, J. Y. C.; Alang Ahmad, S. A.; Mohmad, A. R. and Ahmad Kamarudin, M. <b>Photoluminescence Investigation of Carrier Localization in Colloidal PbS and PbS/MnS Quantum Dots</b>, ACS Omega, 2020, 5, 48, 30956–30962</p> <p>14) Mohd Azmi, U.Z., Yusof, N.A., Abdullah, J. et al. <b>Portable electrochemical immunosensor for detection of <i>Mycobacterium tuberculosis</i> secreted protein CFP10-ESAT6 in clinical sputum samples</b>. Microchim Acta 188, 20 (2021)</p> <p>15) P. N. S. Zainal, S. A. A. Ahmad, L. H. Ngee and I. Ling, " <b>Development of Electrochemical sensor Based on Thiolated Calixarene Functionalized Gold Nanoparticles for The Selective Recognition of Anthracene</b>," in IEEE Sensors Journal, doi: 10.1109/JSEN.2020.3038916</p> <p>16) Rosly, N.Z.; Abdullah, A.H.; Ahmad Kamarudin,M.; Ashari, S.E.; Alang Ahmad, S.A. <b>Adsorption of Methylene Blue Dye by Calix[6]Arene-Modified Lead Sulphide (Pbs): Optimisation Using Response Surface Methodology</b>. Int. J. Environ. Res. Public Health 2021, 18, 397.</p> |
| <i>Books/Monographs</i> |  |

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|------------------------|---|---|
| <i>Chapter in book</i> | <ol style="list-style-type: none"> <li>1. Siti Fatimah Nur Abdul Aziz and Shahrul Ainliah Alang Ahmad <i>Emerging Themes in Fundamentals and Applied Sciences</i>, Chapter 6 Sensor Application, <b>UPM Derivatization of ferrocene on indium tin oxide (ITO) by CLICK reaction</b>, (2017) 90-100</li> <br/> <li>2. Zur Mira Azizah @ Nor Haiza Lah, Shahrul Ainliah Alang Ahmad <i>Emerging Themes in Fundamentals and Applied Sciences</i>, Chapter 10 Sensor studies <b>An electrochemical immunosensor for detection of breast cancer</b> (2018) 128-136</li> <br/> <li>3. Putri Nur Syafieqah binti Zainal and Shahrul Ainliah Alang Ahmad <i>Emerging Themes in Fundamentals and Applied Sciences</i>, Chapter 10 Sensor studies <b>Fabrication of calixarene/reduced graphene oxide nanocomposite (ERGO-C4) as an electrochemical sensor of naphthalene</b> (2018) 136-146</li> </ol> | 3 |
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