

# CURRICULUM VITAE



## A. BUTIR-BUTIR PERIBADI *(Personal Details)*

Nama Penuh <i>(Full Name)</i>	<b>EZYANA BINTI KAMAL BAHRIN</b>	Gelaran <i>(Title)</i> : DR
Jawatan <i>(Designation)</i> SENIOR LECTURER		

Alamat Semasa <i>(Current Address)</i>	Jabatan/Fakulti <i>(Department/Faculty)</i>	E-mel dan URL <i>(E-mail Address and URL)</i>
PUSAT ASASI SAINS PERTANIAN, UNIVERSITI PUTRA MALAYSIA, 43400 SERDANG, SELANGOR	PUSAT ASASI SAINS PERTANIAN, UNIVERSITI PUTRA MALAYSIA, 43400 SERDANG, SELANGOR	E-mail: ezyana@upm.edu.my  URL: <a href="http://profile.upm.edu.my/ezyana">http://profile.upm.edu.my/ezyana</a>  ORCID : 0000-0002-5214-225X  SCOPUS ID : 37101129300

## B. KELAYAKAN AKADEMIK *(Academic Qualification)*

Nama Sijil / Kelayakan <i>(Certificate / Qualification obtained)</i>	Nama Sekolah Institusi <i>(Name of School / Institution)</i>	Tahun <i>(Year obtained)</i>	Bidang pengkhususan <i>(Area of Specialization)</i>
DOCTOR OF PHILOSOPHY	UNIVERSITI PUTRA MALAYSIA	2013	INDUSTRIAL BIOTECHNOLOGY
BACHELOR OF SCIENCE	UNIVERSITI PUTRA MALAYSIA	2007	BIOTECHNOLOGY

## C. KEMAHIRAN BAHASA *(Language Proficiency)*

Bahasa / Language	Lemah <i>Poor (1)</i>	Sederhana <i>Moderate (2)</i>	Baik <i>Good (3)</i>	Amat Baik <i>Very good (4)</i>	Cemerlang <i>Excellent (5)</i>
English				√	
Bahasa Melayu					√
Chinese					
Lain-lain <i>(other)</i> :					

## D. PENGALAMAN SAINTIFIK DAN PENGKHUSUSAN *(Scientific experience and Specialisation)*

Organization	Position	Start Date	End Date	Expertise

Asia Pacific Journal of Molecular Biology and Biotechnology	Journal Reviewer	2020	To date	Biomass and Bioenergy
Energy Reports	Journal Reviewer	2020	To date	Biomass and Bioenergy
Journal of Oil Palm Research	Journal Reviewer	2019	To date	Biomass Pretreatment Technology
Brazilian Journal of Microbiology	Journal Reviewer	2019	To date	Enzyme Technology and Bioprocessing
Journal of Cleaner Production (Elsevier)	Journal Reviewer	2017	To date	Biomass Pretreatment Technology
Preparative Biochemistry & Biotechnology (Taylor & Francis Online)	Journal Reviewer	2016	To date	Enzyme Technology and Bioprocessing

#### **E. PEKERJAAN** (*Employment*)

<b>Majikan / Employer</b>	<b>Jawatan / Designation</b>	<b>Jabatan / Department</b>	<b>Tarikh lantikan / Start Date</b>	<b>Tarikh tamat / Date Ended</b>
UNIVERSITI PUTRA MALAYSIA	SENIOR LECTURER	Unit Biologi, Pusat Asasi Sains Pertanian	4 JUNE 2014	TO DATE
UNIVERSITI PUTRA MALAYSIA	POST-DOCTORAL FELLOW	Bioprocess Technology, Faculty of Biotechnology and Biomolecular Sciences	1 AUGUST 2013	31 MAY 2014
MARDI MALAYSIAN AGRICULTURAL RESEARCH AND DEVELOPMENT INSTITUTE (MARDI)	RESEARCH ASSISTANT	Program Biologi Molekul dan Kejuruteraan Genetik (BT01)	1 FEBRUARY 2012	30 JUNE 2013

#### **F. ANUGERAH DAN HADIAH** (*Honours and Awards*)

<b>Name of awards</b>	<b>Title</b>	<b>Award Authority</b>	<b>Award Type</b>	<b>Year</b>
<i>Non-Academic Awards</i>	BRONZE Medal, Invention, Research and Innovation	Universiti Putra Malaysia	National	2007

	Exhibition			
Academic Awards	GOLD, PicTL2019	Universiti Putra Malaysia	National	2019
Academic Awards	SILVER, PicTL2019	Universiti Putra Malaysia	National	2019

**G. SENARAI PENERBITAN (Sila masukan nama pengarang, tajuk, nama jurnal, jilid, muka surat dan tahun diterbitkan) (List of publications – author (s), title, journal, volume, page and year published)**

Journal	<ol style="list-style-type: none"> <li>1. Arbaain, E. N. N., <b>Bahrin, E.K.</b> Noor, N. M., Ibrahim, M. F., Ramli, N., Abd-Aziz, S. (2019). Chemical-Free Pretreatment of Unwashed Oil Palm Empty Fruit Bunch by Using Locally Isolated Fungus (<i>Schizophyllum commune</i> ENN1) for Delignification. <i>Food and Bioproducts Processing</i> 118, 207-216. (IF: <b>3.324</b>).</li> <li>2. Zainudin, M.H.M., Mustapha, N.A., Hassan, M.A., <b>Bahrin, E.K.</b>, Tokura, M. (2019). A Highly Thermostable Crude Endoglucanase Produced by A Newly Isolated <i>Thermobifida fusca</i> Strain UPMC 901, <i>Scientific reports</i> 9 (1), 1-8. (IF: <b>4.525</b>).</li> <li>3. Arbaain, E.N.N., <b>Bahrin, E.K.</b>, Ibrahim, M.F., Ando, Y., Abd-Aziz, S. (2019). Biological Pretreatment of Oil Palm Empty Fruit Bunch by <i>Schizophyllum commune</i> ENN1 without Washing and Nutrient Addition. <i>Processes</i> 7 (7), 402. (IF: <b>1.963</b>).</li> <li>4. Ariff, I.N.M., <b>Bahrin, E.K.</b>, Ramli, N., Abd-Aziz, S. (2019). Direct Use of Spent Mushroom Substrate from <i>Pleurotus pulmonarius</i> as a Readily Delignified Feedstock for Cellulase Production. <i>Waste and Biomass Valorization</i> 10 (4), 839-850. (IF: <b>2.227</b>).</li> <li>5. Husin, H., Ibrahim, M.F., <b>Bahrin, E.K.</b>, Abd-Aziz S. (2019). Simultaneous saccharification and fermentation of sago hampas into biobutanol by <i>Clostridium acetobutylicum</i> ATCC 824. <i>Energy Science &amp; Engineering</i> 7 (1), 66-75. (IF: <b>2.893</b>).</li> <li>6. Jenol, M.A., Ibrahim, M.F., <b>Bahrin, E.K.</b>, Kim, S.W., Abd-Aziz, S. (2019). Direct Bioelectricity Generation from Sago Hampas by <i>Clostridium beijerinckii</i> SR1 Using Microbial Fuel Cell. <i>Molecules</i> 24 (13), 2397. (IF: <b>3.060</b>).</li> <li>7. Zulkarnain, A., <b>Bahrin, E. K.</b>, Ramli, N., Lai Yee, P., Abd-Aziz, S. (2018). Alkaline hydrolysate of oil palm empty fruit bunch as potential substrate for biovanillin production via two-step bioconversion. <i>Waste and Biomass Valorization</i> 9 (1), 13-23. (IF: <b>0.915</b>).</li> <li>8. Zainal, N.H., Aziz, A.A. Ibrahim, M.F. Idris, J, Hassan, M.A. <b>Bahrin, E.K.</b>, Jalani, N. F., Sulihatimarsyila, N., Wafti, A., Abd-Aziz, S. (2018). Carbonisation-Activation of Oil Palm Kernel Shell To Produce Activated Carbon And Methylene Blue Adsorption Kinetics. <i>Journal of Oil Palm Research</i> 30 (3), 495-502. (IF: <b>0.427</b>).</li> <li>9. Ibrahim, M.F., Ramli, N., <b>Bahrin, E.K.</b>, Abd-Aziz, S. (2017). Cellulosic biobutanol by Clostridia: Challenges and improvements. <i>Renewable and</i></li> </ol>
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	<p><i>Sustainable Energy Reviews</i> 79, 1241-1254. (IF: 9.184).</p> <ol style="list-style-type: none"> <li>10. Zainal, N. H., Aziz, A. A., Idris, J., Mamat, R., Hassan, M. A., <b>Bahrin, E. K.</b> Abd-Aziz, S. (2017). Microwave-assisted pre-carbonisation of palm kernel shell produced charcoal with high heating value and low gaseous emission. <i>Journal of Cleaner Production</i>. 142: 2945-2949 (IF: 4.959).</li> <li>11. Masran, R., Zanirun, Z., <b>Bahrin, E.K.</b>, Ibrahim, M.F., Lai Yee, P., Abd-Aziz, S. (2016). Harnessing the potential of ligninolytic enzymes for lignocellulosic biomass pretreatment. <i>Applied Microbiology Biotechnology</i> 100(12):5231-5246. (IF: 3.337).</li> <li>12. Abdullah, S. S. S., Shirai, Y., <b>Bahrin, E. K.</b>, Hassan, M. A. (2015). Fresh oil palm frond juice as a renewable, non-food, non-cellulosic and complete medium for direct bioethanol production. <i>Industrial Crops and Products</i> 63: 357-361. (IF: 3.208).</li> <li>13. Zanirun, Z., <b>Bahrin, E.K.</b> L.Y. Phang, M.A. Hassan and S. Abd-Aziz. (2015). Enhancement of fermentable sugars production from oil palm empty fruit bunch by ligninolytic enzymes mediator system. <i>International Biodeterioration &amp; Biodegradation</i>. 105: 13-20. (IF: 2.131).</li> <li>14. Zanirun, Z., <b>Bahrin, E. K.</b>, Phang L.-Y, Hassan, M. A., Abd-Aziz S. (2013). Effect of Physical and Chemical Properties of Oil Palm Empty Fruit Bunch, Decanter Cake and Sago Pith Residue on Cellulases Production by <i>Trichoderma asperellum</i> UPM1 and <i>Aspergillus fumigatus</i> UPM2. <i>Applied biochemistry and biotechnology</i> 172(1):423-35. (IF: 1.94).</li> <li>15. Nik Mahmud, N. A., Baharuddin, A. S., <b>Bahrin, E. K.</b>, Sulaiman, A., Naim, M. N., Zakaria, R., Hassan, M. A., Nishida, H. and Shirai, Y. (2013). Enzymatic Saccharification of Oil Palm Mesocarp Fiber (OPMF) Treated with Superheated Steam. <i>BioResources</i> 8(1): 1320-1331. (IF: 1.348).</li> <li>16. <b>Bahrin, E. K.</b>, Ibrahim, M. F., Abd Razak, M. N., Md Salleh, M., Md. Shah U. K., Alitheen N. and Abd-Aziz, S. (2012). Improved cellulase production by <i>Botryosphaeria rhodina</i> from OPEFB at low level of moisture condition through statistical optimisation. <i>Preparative Biochemistry and Biotechnology</i> 42(2):155-170. (IF: 1.241).</li> <li>17. <b>Bahrin, E.K.</b>, Baharuddin, A.S., Ibrahim, M.F., Razak, M.N.A., Sulaiman, A., Abd-Aziz, S., Hassan, M.A., Shirai, Y. and Nishida, H. (2012). Physicochemical property changes and enzymatic hydrolysis enhancement of oil palm empty fruit bunches treated with superheated steam. <i>BioResources</i> 7(2): 1784-1801. (IF: 1.348).</li> <li>18. <b>Bahrin, E. K.</b>, Seng, P.Y. and Abd-Aziz, S. (2011). Effect of substrate particle size on cellulase production by <i>Botryosphaeria</i> sp. under solid state fermentation. <i>Australian Journal of Basic &amp; Applied Science</i> 5(3): 276-280.</li> </ol>
<p><i>Proceedings</i></p>	<ol style="list-style-type: none"> <li>1. Izan, N. L. M., Arbaain E. N. N., and <b>E. K. Bahrin</b>. Mycelium-based composite: A way forward for renewable material. V-SMS2020-2nd Symposium on Multidisciplinary Science 2020 (V-SMS2020), 12 Aug 2020.</li> <li>2. Azaman, S. N. A., <b>Bahrin, E. K.</b>, Kamarudin, N. H. A., Marina, M. T. M. T., Hassan, N. H., Ishak, N. A., Aziz, D. and Jali, A. Improvement of foundation</li> </ol>

student performance in biology through intensive station-based learning approach, International Academic Conference in Education, Language and Psychology (IACELP), 22-23 February 2020, Langkawi, Malaysia.

3. Arbaain, E.N.N., **Bahrin, E.K.**, Ibrahim, M.F. and Abd-Aziz, S. *Schizophyllum* sp. as delignifying agent in biological pretreatment of lignocellulosic biomass The Asian Federation of Biotechnology Malaysia Chapter International Symposium 2019 (AFOBMCIS 2019), 20-23 October 2019, Putrajaya, Malaysia.
4. Arbaain, E.N.N., **Bahrin, E.K.**, Ibrahim, M.F. and Abd-Aziz, S. Fungal Pretreatment of Oil Palm Empty Fruit Bunch (OPEFB) using Locally Isolated Fungus for Fermentation Feedstock BEFEW 2018: 2018 International Conference on the Biomass-Environment-Food-Energy-Water (BEFEW) Nexus, 12 December 2018, Bangi, Malaysia.
5. Md Razali, N. A. A., Husin, H., Salleh, M. S., M F. Ibrahim, **E. K. Bahrin** and S. Abd-Aziz. Biobutanol Production through Simultaneous Saccharification and Fermentation. Asian Congress of Biotechnology, 15-19 November 2015 Kuala Lumpur, Malaysia.
6. Zainal, N. H., Yusoff, M. E. M., Idris, J., Ibrahim, M. F., **Bahrin, E. K.** and S. Abd-Aziz. Activated Carbon from Oil Palm Shell and Oil Palm Decanter Cake under Low Pressure of Steam Blasting Reactor. Asian Congress of Biotechnology, 15-19 November 2015 Kuala Lumpur, Malaysia.
7. Abdullah, S. S. S., **Bahrin, E. K.**, Hassan M. A. and Shirai, Y. Glucose Preservation In Non-food Juice of Oil Palm Frond at Mild Temperature Storage for Bioethanol Production. Asian Congress of Biotechnology, 15-19 November 2015 Kuala Lumpur, Malaysia.
8. Masran, R., Zanirun, Z., Rizal, N. F. A. A., **E. K. Bahrin**, Ibrahim, M. F., Phang, L. Y. and Abd-Aziz, S. Laccase Enzyme Production by *Pycnoporus sanguineus*. Asian Congress of Biotechnology, 15-19 November 2015 Kuala Lumpur, Malaysia.
9. **Bahrin, E. K.**, Zanirun, Z., Masran, R., Ibrahim M. F. and Abd-Aziz S. (2015). Lignin as a barrier in biological pretreatment of lignocellulosic biomass Asian Federation of Biotechnology Regional Symposium, 27-30 May 2015, Depok, Indonesia.
10. Iffah-Nabilah, M. A., Aiza, N. A., Masran, R., **Bahrin, E. K.**, Ramli N. and Abd-Aziz, S. (2014). Ligninolytic enzymes profile during fructification of *Pleurotus sajor-caju* and *Pleurotus florida*. AFOB Regional Symposium, 9-11 February 2014, Kuala Lumpur, Malaysia.
11. Zulkarnain, A., **Bahrin, E. K.**, Ramli, N., Phang, L. Y. and Abd-Aziz, S. (2014). Interactions between selected phenolic precursors towards biovanillin production using two-level factorial design. AFOB Regional Symposium, 9-11 February 2014, Kuala Lumpur, Malaysia.
12. **Bahrin, E. K.**, Abd-Aziz, S. and Hassan, M.A. (2010). Cellulase production by

	<p><i>Botryosphaeria rhodina</i> from OPEFB at low moisture condition. International Symposium on Low Carbon &amp; Renewable Energy Technology, 15-18 November 2010, Jeju Korea.</p> <p>13. Abd-Aziz, S., Yin, K. S., <b>Bahrin, E. K.</b>, Abu Bakar, N. K., Alitheen, N. and Hassan, M. A. (2007). Microbial conversion of palm oil empty fruit bunch to fermentable sugars (polyoses) for bioethanol production. In: Abstract Book of the 29<sup>th</sup> Symposium of Malaysian Society for Microbiology. Kuala Terengganu.</p>
Patent	<p>Hassan, M. A., Baharuddin, A. S., Sulaiman, A., Nishida, H., Shirai, Y., Wakisaka, M., Zulkhairi, M., <b>Bahrin E. K.</b> and Hock, L. S. A (2011). Method for oil palm biomass treatment using high pressure and/or superheated steam for the production of high value bioproducts. Patent Pending IP: PI2011000731</p>

<b>H. PROJEK PENYELIDIKAN TERDAHULU</b> (Past Research Project)					
<i>Project No.</i>	<i>Project Title</i>	<i>Role</i>	<i>Year</i>	<i>Source of fund</i>	<i>Status</i>
5540060	CHARACTERIZATION OF MYCELIUM-BASED OIL PALM BIOMASS COMPOSITE PRODUCED USING DIFFERENT LOCAL FUNGI	Project Leader	2019	Ministry of Education, Malaysia	On-going
9589700	SCIENCE, TECHNOLOGY, ENGINEERING AND MATHEMATICS (STEM) INTEGRATED EDUCATION IN MALAYSIA: PROJECT-BASED AND TECHNOLOGY-BASED.	Co-Researcher	2017	UPM	On-going
9597000	PRODUCTION OF BACTERIAL NANOCELLULOSE (NATA DE PINA) USING PINEAPPLE PEELS AS SUBSTRATE.	Co-Researcher	2017	UPM	On-going
9484600	BIOLOGICAL PRETREATMENT OF OIL PALM EMPTY FRUIT BUNCH (OPEFB) USING LOCALLY INDIGENOUS FUNGUS AS FERMENTATION FEEDSTOCK	Project Leader	2016	UPM	On-going
6300156	PROMOTION OF GREEN ECONOMY WITH PALM OIL INDUSTRY FOR BIODIVERSITY CONSERVATION IN MALAYSIA	Co-Researcher	2014	SATREPS, Ministry of Education, Malaysia	On-going
9407300	SIMULTANEOUS ENZYMATIC SACCHARIFICATION AND ACETONE-BUTANOL-ETHANOL FERMENTATION USING LIGNOCELLULOSIC BIOMASS	Co-Researcher	2013	UPM	On-going

## I. RUJUKAN *(Reference)*

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2	<p>PROF DR SURAINI ABD. AZIZ Department of Bioprocess Technology Faculty of Biotechnology and Biomolecular Sciences University Putra Malaysia Tel: 03-8947 1050 Email : <a href="mailto:suraini@upm.edu.my">suraini@upm.edu.my</a></p>