# FILE NO. CRG/2021/000722 SCIENCE & ENGINEERING RESEARCH BOARD

Science and Engineering Research Board 3rd & 4th Floor, Block II Technology Bhavan, New Mehrauli Road New Delhi - 110016

Dated: 12-May-2022

#### ORDER

Subject: Financial Sanction of the research project titled "Electrochemical discharge machined serpentine micro-channels in fused quartz for photo-catalytic in-situ hydrogen evolution in hydrogen fuel cells" under the guidance of Dr. Siddhartha P Duttagupta, Department of Electrical Engineering, Indian Institute of Technology Bombay, Iit po powai, mumbai, Mumbai city, Maharashtra-400076 and by Dr. Pradeep Dixit, Associate Professor, Department Of Mechanical Engineering, Indian Institute Of Technology Bombay and by Dr. Richard Pinto, Professor, Electronics And Communication Engineering, Alva's Institute Of Engineering And Technology and by Dr. Jayarama A, Associate Professor, Physics, Alva's Institute Of Engineering And Technology - Release of 1st grant.

Sanction of **Science and Engineering Research Board (SERB)** is hereby accorded to the above mentioned project at a total cost of **Rs. 5118696/- (Rs.** Rupees Fifty One Lakh Eighteen Thousand Six Hundred and Ninety Six only **Only)** with break-up of **Rs. 2050000/- under Capital (Non-recurring) head** and **Rs. 3068696/- under General (Recurring) head** for a duration of 36 months. The items of expenditure for which the total allocation of **Rs. 5118696/-** has been approved are given below:

The following budget may be considered for Alva's Institute Of Engineering And Technology, Solapur - Mangalore Highway, Shobhavana Campus MIJAR, Moodbidri

S. No	Head	Total (in Rs.)
Α	Non-recurring	
1	Equipment -> Water chiller -> turbo pump -> Multi-target sputter system -> Thermal Evaporator -> RF generator with matching network	2000000
A'	Total (Non-Recurring)	2000000
В	Recurring Items	
1	Recurring - I : (Research Personnel) Recurring - II : (Consumables, Travel, Contingencies) Recurring - III : Scientific Social Responsibility	550000 0
2	Recurring - IV : (Overhead Charges)	255000
B'	Total (Recurring)	805000
С	Total cost of the project (A' + B')	2805000

The following budget may be considered for Indian Institute Of Technology Bombay, IIT PO Powai, Mumbai

S. No	Head	Total (in Rs.)
Α	Non-recurring	
1	Equipment -> Accessory for ECDM Machine	50000
A'	Total (Non-Recurring)	50000
В	Recurring Items	
1	Recurring - I : (Research Personnel) Recurring - II : (Consumables, Travel, Contingencies) Recurring - III : Scientific Social Responsibility	1443360 550000 60000
2	Recurring - IV : (Overhead Charges)	210336
B' .	Total (Recurring)	2263696
С	Total cost of the project (A' + B')	2313696

<sup>2.</sup> Sanction of the grant is subject to the conditions as detailed in Terms & Conditions available at website ( www.serb.gov.in).

- 3. Overhead expenses are meant for the host Institute towards the cost for providing infrastructural facilities and general administrative support etc. including benefits to the staff employed in the project.
- 4. While providing operational flexibility among various subheads under head Recurring-A, it should be ensured that not more than Rs. 1.5 lakh each should be spent for travel and contingency.
- 5. As per rule 211 of GFR, the accounts of project shall be open to inspection by sanctioning authority/audit whenever the institute is called upon to do so.
- 6. The institute will furnish to the SERB, New Delhi, separate Utilization certificate(UCs) financial year wise to the SERB for Recurring (Grants-in-aid General) & Non-Recurring (Grants for creation of capital assets) and an audited statement of accounts pertaining to the grant immediately after the end of each financial year.
- 7. The research personnel sanctioned in the project, if any is co-terminus with the duration of the project and SERB will have no liability to meet the fellowship and salary of supporting staff if any. beyond the duration of the project
- 8. The institute will maintain separate audited accounts for the project. A part or whole of the grant must be kept in an interest earning bank account which is to be reported to SERB. The interest thus earned will be treated as credit to the institute to be adjusted towards further installment of the grant.
- 9. The sanctioned equipments and consumables would be produced as per GFR 2005 and its disposal would be done with prior approval of SERB.
- 10. The institute may refund any unspent balance to SERB by means of a Demand Draft favoring "FUND FOR SCIENCE AND ENGINEERING RESEARCH" payable at New Delhi.

To, Under Secretary SERB, New Delhi

Copy forwarded for information and necessary action to: -

1.	The Principal Director of Audit, A.G.C.R.Building, IIIrd Floor I.P. Estate, Delhi-110002
2.	Sanction Folder, SERB , New Delhi.
3.	File Copy
4.	Dr. Siddhartha P Duttagupta Department of Electrical Engineering Indian Institute of Technology Bombay , lit po powai, mumbai, Mumbai city, Maharashtra-400076 Email: sdgupta@ee.iitb.ac.in Mobile: 919833886730
	Dr. Pradeep Dixit Department Of Mechanical Engineering Indian Institute Of Technology Bombay  Dr. Richard Pinto Electronics And Communication Engineering Alva's Institute Of Engineering And Technology
	Dr. Jayarama A Physics Alva's Institute Of Engineering And Technology (Start date of the project may be intimated by name to the undersigned. For guidance, terms & Conditions etc. Please visit <a href="https://www.serb.gov.in">www.serb.gov.in</a> .)
5.	PRINCIPAL, Alva's Institute Of Engineering And Technology, Solapur - Mangalore Highway, Shobhavana Campus MIJAR, Moodbidri REGISTRAR,
	Indian Institute Of Technology Bombay, IIT PO Powai, Mumbai  (Receipt of Grant may be intimated by name to the undersigned)

### FILE NO. CRG/2021/000722

## SCIENCE & ENGINEERING RESEARCH BOARD(SERB)

(A statutory body of the Department of Science & Technology, Government of India)

Science and Engineering Research Board 3rd & 4th Floor, Block II Technology Bhavan, New Mehrauli Road New Delhi - 110016

Dated: 12 May, 2022

#### **ORDER**

Subject: Financial Sanction of the research project titled Electrochemical discharge machined serpentine micro-channels in fused quartz for photo-catalytic in-situ hydrogen evolution in hydrogen fuel cells under the guidance of Dr. Siddhartha P Duttagupta, Department of Electrical Engineering, Indian Institute of Technology Bombay , Iit po powai, mumbai, Mumbai city, Maharashtra-400076 and by Dr. Pradeep Dixit, Associate Professor, Department Of Mechanical Engineering, Indian Institute Of Technology Bombay and by Dr. Richard Pinto, Professor, Electronics And Communication Engineering, Alva's Institute Of Engineering And Technology and by Dr. Jayarama A, Associate Professor, Physics, Alva's Institute Of Engineering And Technology - Release of 1st grant.

Sanction of Science and Engineering Research Board (SERB) is hereby accorded to the above mentioned project at a total cost of Rs. 2313696/- (Rs. Twenty Three Lakh Thirteen Thousand Six Hundred and Ninety Six Only) with break-up of Rs. 50000/- under Capital (Non-recurring) head and Rs. 2263696/- under General (Recurring) head for a duration of 36 months. The items of expenditure for which the total allocation of Rs. 2313696/- has been approved are given below:

The following budget may be considered for Indian Institute Of Technology Bombay, IIT PO Powai, Mumbai

S. No	Head	Total (in Rs.)
A	Non-recurring	
1	Equipment -> Accessory for ECDM Machine	50000
A'	Total (Non-Recurring)	50000
В	Recurring Items	
1	Recurring - I : (Research Personnel) Recurring - II : (Consumables, Travel, Contingencies) Recurring - III : Scientific Social Responsibility	1443360 550000 60000
2	Recurring - IV : (Overhead Charges)	210336
B'	Total (Recurring)	2263696
С	Total cost of the project (A' + B')	2313696

- 2. Sanction of the grant is subject to the conditions as detailed in Terms & Conditions available at website ( www.serb.gov.in).
- 3. Overhead expenses are meant for the host Institute towards the cost for providing infrastructural facilities and general administrative support etc. including benefits to the staff employed in the project.
- 4. While providing operational flexibility among various subheads under head Recurring-II, it should be ensured that not more than Rs. 1.5 lakh each should be spent for travel and contingency.
- 5. Budget sanctioned under Scientific Social Responsibility (SSR) is meant only for activites enlisted under SSR norms and under no circumstances it can be reappropriated.
- 6. As per rule 211 of GFR, the accounts of project shall be open to inspection by sanctioning authority/audit whenever the institute is called upon to do so.
- 7. The sanctioned equipment would be procured as per GFR and its disposal of the same would be done with prior approval of SERB.
- 8. The institute will furnish to the SERB, separate Utilization certificate (UCs) financial year wise to the SERB for Recurring (Grants-in-aid General) & Non-Recurring (Grants for creation of capital assets) and an audited statement of accounts pertaining to the grant immediately after the end of each financial year.
- 9. The institute will maintain separate audited accounts for the project. A part or whole of the grant must be kept in an interest earning bank account which is to be reported to SERB. The interest thus earned will be treated as credit to the institute to be adjusted towards further installment of the grant.
- 10. The research personnel sanctioned in the project, if any is co-terminus with the duration of the project and SERB will have no liability to meet the fellowship and salary of supporting staff if any, beyond the duration of the project

- 11. The institute may refund any unspent balance to SERB by means of a Demand Draft favoring "FUND FOR SCIENCE AND ENGINEERING RESEARCH" payable at New Delhi.
- 12. The project File no. CRG/2021/000722 should be mentioned in all communications arising from the above project. The organization/institute/university should ensure that the technical support/financial assistance provided to them by SERB should invariably be highlighted/ acknowledged in their media releases as well as in bold letters in the opening paragraphs of their Annual Report.
- 13. In addition, the investigator/host institute must also acknowledge the support provided to them in all publications, patents and any other output emanating out of the project/program funded by SERB.
- 14. Sanction order for release of funds under a) Non-recurring and b) Recurring will be issued separately depending on the availability of funds. The project become operational from the day the first release of grant received by the implementing Institute.

To, Under Secretary SERB, New Delhi

Copy forwarded for information and necessary action to: -

1.	The Principal Director of Audit, A.G.C.R.Building, IIIrd Floor I.P. Estate, Delhi-110002	
2.	Sanction Folder, SERB , New Delhi.	
3.	File Copy	
4.	Dr. Siddhartha P Duttagupta Department of Electrical Engineering Indian Institute of Technology Bombay , Iit po powai, mumbai, Mumbai city, Maharashtra-400076 Email: sdgupta@ee.iitb.ac.in Mobile: 919833886730	
	Dr. Pradeep Dixit Department Of Mechanical Engineering Indian Institute Of Technology Bombay	
	Dr. Richard Pinto Electronics And Communication Engineering Alva's Institute Of Engineering And Technology	
	Dr. Jayarama A Physics Alva's Institute Of Engineering And Technology (Start date of the project may be intimated by name to the undersigned. For guidance, terms & Conditions etc. Please visit <a href="https://www.serb.gov.in">www.serb.gov.in</a> .)	
5.	REGISTRAR, Indian Institute Of Technology Bombay, IIT PO Powai, Mumbai	
	(Receipt of Grant may be intimated by name to the undersigned)	

## FILE NO. CRG/2021/000722-G

## SCIENCE & ENGINEERING RESEARCH BOARD(SERB)

(A statutory body of the Department of Science & Technology, Government of India)

Science and Engineering Research Board 3rd & 4th Floor, Block II Technology Bhavan, New Mehrauli Road New Delhi - 110016

Dated: 12 May, 2022

#### **ORDER**

Subject: Research project entitled Electrochemical discharge machined serpentine micro-channels in fused quartz for photo-catalytic in-situ hydrogen evolution in hydrogen fuel cells under the guidance of Dr. Siddhartha P Duttagupta, Department of Electrical Engineering, Indian Institute of Technology Bombay, Iit po powai, mumbai, Mumbai city, Maharashtra-400076 and by Dr. Pradeep Dixit, Associate Professor, Department Of Mechanical Engineering, Indian Institute Of Technology Bombay and by Dr. Richard Pinto, Professor, Electronics And Communication Engineering, Alva's Institute Of Engineering And Technology and by Dr. Jayarama A, Associate Professor, Physics, Alva's Institute Of Engineering And Technology.

- 1. In continuation of SERB's sanction order No. CRG/2021/000722 dated 12 May, 2022, sanction of the competent authority is hereby accorded to the payment of a sum of Rs.981230/- under 'Grants-in-aid General' to Indian Institute Of Technology Bombay, Iit Po Powai, Mumbai, Mumbai City, Maharashtra-400076 being the grant for the financial year 2022-2023 for implementation of the above said project.
- 2. Sanction of the grant is subject to the conditions as detailed in Terms & Conditions available at the website (www.serb.gov.in) and as mentioned in the sanction order of even number dated 12 May, 2022.
- 3. As this is the first grant being released under 'Grants-in-aid General' for the project, no previous U/C is required.
- 4. The expenditure involved is debitable to Fund for Science & Engineering Research (FSER) This release is being made under Core Research Grant (PAC Electrical Electronics & Computer Engineering) (General)
- 5. The Sanction has been issued with the approval of the competent authority on **04 May, 2022** and vide Diary No. SERB/F/344/2022-2023 dated **11 May, 2022**...
- 6. The release amount of **Rs. 981230**/- (Rupees Nine Lakh Eighty One Thousand Two Hundred and Thirty only) will be drawn by the Under Secretary of the SERB and will be disbursed by means of RTGS transaction as per their Bank details given below:

PFMS Unique Code	IIT BOMBAY	X
Account Name	IITB PROJECT AND CONSULTANCY	V
Account Number	2724101113370	
Bank Name & Branch	CANARA BANK IIT POWAI, Ist FLOOR, GULMOHAR BUILDING, IIT B CAMPUS, POWAI, MUMBAI 400076	
IFSC/RTGS Code	CNRB0002724	1
Email id of A/C Holder	registrar@iitb.ac.in	
Email id of PI	sdgupta@ee.iitb.ac.in	1
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(Dr. Anima Johari) Scientist D anima.johari@serb.gov.in

To, Under Secretary SERB, New Delhi

1. The Principal Director of Audit, A.G.C.R.Building, IIIrd Floor I.P. Estate, Delhi-110002	
2.	Sanction Folder, SERB , New Delhi.
3.	File Copy

4.	Dr. Siddhartha P Duttagupta Department of Electrical Engineering Indian Institute of Technology Bombay , Iit po powai, mumbai, Mumbai city, Maharashtra-400076 Email: sdgupta@ee.iitb.ac.in Mobile: 919833886730
	Dr. Pradeep Dixit Department Of Mechanical Engineering Indian Institute Of Technology Bombay
	Dr. Richard Pinto Electronics And Communication Engineering Alva's Institute Of Engineering And Technology
	Dr. Jayarama A Physics Alva's Institute Of Engineering And Technology (Start date of the project may be intimated by name to the undersigned. For guidance, terms & Conditions etc. Please visit <a href="https://www.serb.gov.in">www.serb.gov.in</a> .)
5.	REGISTRAR, Indian Institute Of Technology Bombay, IIT PO Powai, Mumbai  (Receipt of Grant may be intimated by name to the undersigned)

FILE NO. CRG/2021/000722-C

## SCIENCE & ENGINEERING RESEARCH BOARD(SERB)

(A statutory body of the Department of Science & Technology, Government of India)

Science and Engineering Research Board 3rd & 4th Floor, Block II Technology Bhavan, New Mehrauli Road New Delhi - 110016

Dated: 12 May, 2022

ORDER

Subject: Research project entitled Electrochemical discharge machined serpentine micro-channels in fused quartz for photo-catalytic in-situ hydrogen evolution in hydrogen fuel cells under the guidance of Dr. Siddhartha P Duttagupta, Department of Electrical Engineering, Indian Institute of Technology Bombay, Iit po powai, mumbai, Mumbai city, Maharashtra-400076 and by Dr. Pradeep Dixit, Associate Professor, Department Of Mechanical Engineering, Indian Institute Of Technology Bombay and by Dr. Richard Pinto, Professor, Electronics And Communication Engineering, Alva's Institute Of Engineering And Technology and by Dr. Jayarama A, Associate Professor, Physics, Alva's Institute Of Engineering And Technology.

- 1. In continuation of SERB's sanction order No. CRG/2021/000722 dated 12 May, 2022, sanction of the competent authority is hereby accorded to the payment of a sum of Rs.50000/- under 'Grants-in-aid Capital' to Indian Institute Of Technology Bombay, Iit Po Powai, Mumbai, Mumbai City, Maharashtra-400076 being the grant for the financial year 2022-2023 for implementation of the above said project.
- 2. Sanction of the grant is subject to the conditions as detailed in Terms & Conditions available at the website (www.serb.gov.in) and as mentioned in the sanction order of even number dated 12 May, 2022.
- 3. As this is the first grant being released under 'Grants-in-aid Capital' for the project, no previous U/C is required.
- 4. The expenditure involved is debitable to Fund for Science & Engineering Research (FSER) This release is being made under Core Research Grant (PAC Electrical Electronics & Computer Engineering) (Capital).
- 5. The Sanction has been issued with the approval of the competent authority on **04 May, 2022** and vide Diary No. **SERB/F/343/2022-2023** dated **11 May, 2022**.
- 6. The release amount of **Rs. 50000/** (Rupees Fifty Thousand only) will be drawn by the Under Secretary of the SERB and will be disbursed by means of BTGS transaction as per their Bank details given below:

PFMS Unique Code	IIT BOMBAY	Я
Account Name	IITB PROJECT AND CONSULTANCY	_
Account Number	2724101113370	16
Bank Name & Branch	CANARA BANK IIT POWAI, Ist FLOOR, GULMOHAR BUILDING, IIT B CAMPUS, POWAI, MUMBAI 400076	
IFSC/RTGS Code	CNRB0002724	4
Email id of A/C Holder	registrar@iitb.ac.in	
Email id of PI	sdgupta@ee.iitb.ac.in	7

(**Dr. Anima Johari**) Scientist D

anima.johari@serb.gov.in

To, Under Secretary SERB, New Delhi

1.	The Principal Director of Audit, A.G.C.R.Building, IIIrd Floor I.P. Estate, Delhi-110002	
2.	Sanction Folder, SERB , New Delhi.	
3.	File Copy	

4.	Dr. Siddhartha P Duttagupta Department of Electrical Engineering
	Indian Institute of Technology Bombay , lit po powai, mumbai, Mumbai city, Maharashtra-400076 Email: sdgupta@ee.iitb.ac.in Mobile: 919833886730
	Dr. Pradeep Dixit
	Department Of Mechanical Engineering Indian Institute Of Technology Bombay
	Dr. Richard Pinto
	Electronics And Communication Engineering Alva's Institute Of Engineering And Technology
	Dr. Jayarama A
	Physics
	Alva's Institute Of Engineering And Technology (Start date of the project may be intimated by name to the undersigned. For guidance, terms & Conditions etc. Please visit <a href="https://www.serb.gov.in">www.serb.gov.in</a> .)
5.	REGISTRAR, Indian Institute Of Technology Bombay, IIT PO Powai, Mumbai
	(Receipt of Grant may be intimated by name to the undersigned)

#### FILE NO. CRG/2021/000722

## SCIENCE & ENGINEERING RESEARCH BOARD(SERB)

(A statutory body of the Department of Science & Technology, Government of India)

Science and Engineering Research Board 3rd & 4th Floor, Block II Technology Bhavan, New Mehrauli Road New Delhi - 110016

Dated: 12 May, 2022

#### ORDER

Subject: Financial Sanction of the research project titled Electrochemical discharge machined serpentine micro-channels in fused quartz for photo-catalytic in-situ hydrogen evolution in hydrogen fuel cells under the guidance of Dr. Richard Pinto, Electronics and Communication Engineering, Alva's Institute of Engineering and Technology, Solapur - Mangalore Highway, Shobhavana Campus MIJAR, Moodbidri and by Dr. Pradeep Dixit, Associate Professor, Department Of Mechanical Engineering, Indian Institute Of Technology Bombay and by Dr. Richard Pinto, Professor, Electronics And Communication Engineering, Alva's Institute Of Engineering And Technology and by Dr. Jayarama A, Associate Professor, Physics, Alva's Institute Of Engineering And Technology - Release of 1st grant.

Sanction of **Science and Engineering Research Board (SERB)** is hereby accorded to the above mentioned project at a total cost of **Rs. 2805000/- (Rs.** Twenty Eight Lakh Five Thousand **Only)** with break-up of **Rs. 2000000/- under Capital (Non-recurring) head** and **Rs.805000/- under General (Recurring) head** for a duration of 36 months. The items of expenditure for which the total allocation of **Rs. 2805000/-** has been approved are given below:

The following budget may be considered for Alva's Institute Of Engineering And Technology, Solapur - Mangalore Highway, Shobhavana Campus MIJAR, Moodbidri

S. No	Head	Total (in Rs.)
Α	Non-recurring	
1	Equipment -> Water chiller -> Multi-target sputter system -> Thermal Evaporator -> RF generator with matching network -> turbo pump	2000000
A'	Total (Non-Recurring)	2000000
В	Recurring Items	
1	Recurring - I : (Research Personnel) Recurring - II : (Consumables, Travel, Contingencies) Recurring - III : Scientific Social Responsibility	550000 0
2	Recurring - IV : (Overhead Charges)	255000
B'	Total (Recurring)	805000
С	Total cost of the project (A' + B')	2805000

- 2. Sanction of the grant is subject to the conditions as detailed in Terms & Conditions available at website ( www.serb.gov.in).
- 3. Overhead expenses are meant for the host Institute towards the cost for providing infrastructural facilities and general administrative support etc. including benefits to the staff employed in the project.
- 4. While providing operational flexibility among various subheads under head Recurring-II, it should be ensured that not more than Rs. 1.5 lakh each should be spent for travel and contingency.
- 5. Budget sanctioned under Scientific Social Responsibility (SSR) is meant only for activites enlisted under SSR norms and under no circumstances it can be reappropriated.
- 6. As per rule 211 of GFR, the accounts of project shall be open to inspection by sanctioning authority/audit whenever the institute is called upon to do so.
- 7. The sanctioned equipment would be procured as per GFR and its disposal of the same would be done with prior approval of SERB.
- 8.The institute will furnish to the SERB, separate Utilization certificate(UCs) financial year wise to the SERB for Recurring (Grants-in-aid General) & Non-Recurring (Grants for creation of capital assets) and an audited statement of accounts pertaining to the grant immediately after the end of each financial year.
- 9. The institute will maintain separate audited accounts for the project. A part or whole of the grant must be kept in an interest earning bank account which is to be reported to SERB. The interest thus earned will be treated as credit to the institute to be adjusted towards further installment of the grant.

- 10. The research personnel sanctioned in the project, if any is co-terminus with the duration of the project and SERB will have no liability to meet the fellowship and salary of supporting staff if any, beyond the duration of the project
- 11. The institute may refund any unspent balance to SERB by means of a Demand Draft favoring "FUND FOR SCIENCE AND ENGINEERING RESEARCH" payable at New Delhi.
- 12. The project File no. CRG/2021/000722 should be mentioned in all communications arising from the above project. The organization/institute/university should ensure that the technical support/financial assistance provided to them by SERB should invariably be highlighted/ acknowledged in their media releases as well as in bold letters in the opening paragraphs of their Annual Report.
- 13. In addition, the investigator/host institute must also acknowledge the support provided to them in all publications, patents and any other output emanating out of the project/program funded by SERB.
- 14. Sanction order for release of funds under a) Non-recurring and b) Recurring will be issued separately depending on the availability of funds. The project become operational from the day the first release of grant received by the implementing Institute.

To, Under Secretary SERB, New Delhi

Copy forwarded for information and necessary action to: -

1.	The Principal Director of Audit, A.G.C.R.Building, IIIrd Floor I.P. Estate, Delhi-110002
2.	Sanction Folder, SERB , New Delhi.
3.	File Copy
4.	Dr. Richard Pinto Electronics and Communication Engineering Alva's Institute of Engineering and Technology , Solapur - Mangalore Highway, Shobhavana Campus MIJAR, Moodbidri Email: rpinto@ee.iitb.ac.in Mobile: 919892818760
	Dr. Pradeep Dixit Department Of Mechanical Engineering Indian Institute Of Technology Bombay
	Dr. Richard Pinto Electronics And Communication Engineering Alva's Institute Of Engineering And Technology
	Dr. Jayarama A Physics Alva's Institute Of Engineering And Technology (Start date of the project may be intimated by name to the undersigned. For guidance, terms & Conditions etc. Please visit <a href="https://www.serb.gov.in">www.serb.gov.in</a> .)
5.	PRINCIPAL, Alva's Institute Of Engineering And Technology, Solapur - Mangalore Highway, Shobhavana Campus MIJAR, Moodbidri
	(Receipt of Grant may be intimated by name to the undersigned)

## FILE NO. CRG/2021/000722-G

## SCIENCE & ENGINEERING RESEARCH BOARD(SERB)

(A statutory body of the Department of Science & Technology, Government of India)

Science and Engineering Research Board 3rd & 4th Floor, Block II Technology Bhavan, New Mehrauli Road New Delhi - 110016

Dated: 12 May, 2022

#### ORDER

Subject: Research project entitled Electrochemical discharge machined serpentine micro-channels in fused quartz for photo-catalytic in-situ hydrogen evolution in hydrogen fuel cells under the guidance of Dr. Richard Pinto, Electronics and Communication Engineering, Alva's Institute of Engineering and Technology, Solapur - Mangalore Highway, Shobhavana Campus MIJAR, Moodbidri and by Dr. Pradeep Dixit, Associate Professor, Department Of Mechanical Engineering, Indian Institute Of Technology Bombay and by Dr. Richard Pinto, Professor, Electronics And Communication Engineering, Alva's Institute Of Engineering And Technology and by Dr. Jayarama A, Associate Professor, Physics, Alva's Institute Of Engineering And Technology.

- 1. In continuation of SERB's sanction order No. CRG/2021/000722 dated 12 May, 2022, sanction of the competent authority is hereby accorded to the payment of a sum of Rs.323330/- under 'Grants-in-aid General' to Alva's Institute Of Engineering And Technology, Solapur Mangalore Highway, Shobhavana Campus MIJAR, Moodbidri being the grant for the financial year 2022-2023 for implementation of the above said project.
- 2. Sanction of the grant is subject to the conditions as detailed in Terms & Conditions available at the website (www.serb.gov.in) and as mentioned in the sanction order of even number dated 12 May, 2022.
- 3. As this is the first grant being released under 'Grants-in-aid General' for the project, no previous U/C is required.
- 4. The expenditure involved is debitable to Fund for Science & Engineering Research (FSER) This release is being made under Core Research Grant (PAC Electrical Electronics & Computer Engineering) (General)
- 5. The Sanction has been issued with the approval of the competent authority on **04 May, 2022** and vide Diary No. **SERB/F/346/2022-2023** dated **11 May, 2022**..
- 6. The release amount of Rs. 323330/ (Rupees Three Lakh Twenty Three Thousand Three Hundred and Thirty only) will be drawn by the Under Secretary of the SERB and will be disbursed by means of RTGS transaction as per their Bank details given below:

PFMS Unique Code	KADK00003778	N
Account Name	AEF AIET RESEARCH AND CONSULTANCY FUND	-
Account Number	5268101015512	<
Bank Name & Branch	CANARA BANK Moodbidri, Vidyagiri Branch	
IFSC/RTGS Code	CNRB0005268	4
Email id of A/C Holder	principalaiet08@gmail.com	
Email id of PI	sdgupta@ee.iitb.ac.in	1

(**Dr. Anima Johari**) Scientist D anima.johari@serb.gov.in

To, Under Secretary SERB, New Delhi

1.	The Principal Director of Audit, A.G.C.R.Building, IIIrd Floor I.P. Estate, Delhi-110002
2.	Sanction Folder, SERB , New Delhi.
3.	File Copy

4.	Dr. Richard Pinto Electronics and Communication Engineering Alva's Institute of Engineering and Technology , Solapur - Mangalore Highway, Shobhavana Campus MIJAR, Moodbidri Email: rpinto@ee.iitb.ac.in Mobile: 919892818760  Dr. Pradeep Dixit Department Of Mechanical Engineering
	Indian Institute Of Technology Bombay  Dr. Richard Pinto Electronics And Communication Engineering Alva's Institute Of Engineering And Technology
	Dr. Jayarama A Physics Alva's Institute Of Engineering And Technology (Start date of the project may be intimated by name to the undersigned. For guidance, terms & Conditions etc. Please visit <a href="https://www.serb.gov.in">www.serb.gov.in</a> .)
5.	PRINCIPAL, Alva's Institute Of Engineering And Technology, Solapur - Mangalore Highway, Shobhavana Campus MIJAR, Moodbidri
	(Receipt of Grant may be intimated by name to the undersigned)

# FILE NO. CRG/2021/000722-C

## SCIENCE & ENGINEERING RESEARCH BOARD(SERB)

(A statutory body of the Department of Science & Technology, Government of India)

Science and Engineering Research Board 3rd & 4th Floor, Block II Technology Bhavan, New Mehrauli Road New Delhi - 110016

Dated: 12 May, 2022

#### ORDER

Subject: Research project entitled Electrochemical discharge machined serpentine micro-channels in fused quartz for photo-catalytic in-situ hydrogen evolution in hydrogen fuel cells under the guidance of Dr. Richard Pinto, Electronics and Communication Engineering, Alva's Institute of Engineering and Technology, Solapur - Mangalore Highway, Shobhavana Campus MIJAR, Moodbidri and by Dr. Pradeep Dixit, Associate Professor, Department Of Mechanical Engineering, Indian Institute Of Technology Bombay and by Dr. Richard Pinto, Professor, Electronics And Communication Engineering, Alva's Institute Of Engineering And Technology and by Dr. Jayarama A, Associate Professor, Physics, Alva's Institute Of Engineering And Technology.

- 1. In continuation of SERB's sanction order No. CRG/2021/000722 dated 12 May, 2022, sanction of the competent authority is hereby accorded to the payment of a sum of Rs.2000000/- under 'Grants-in-aid Capital' to Alva's Institute Of Engineering And Technology, Solapur Mangalore Highway, Shobhavana Campus MIJAR, Moodbidri being the grant for the financial year 2022-2023 for implementation of the above said project.
- 2. Sanction of the grant is subject to the conditions as detailed in Terms & Conditions available at the website (www.serb.gov.in) and as mentioned in the sanction order of even number dated 12 May, 2022.
- 3. As this is the first grant being released under 'Grants-in-aid Capital' for the project, no previous U/C is required.
- 4. The expenditure involved is debitable to Fund for Science & Engineering Research (FSER) This release is being made under Core Research Grant (PAC Electrical Electronics & Computer Engineering) (Capital).
- 5. The Sanction has been issued with the approval of the competent authority on **04 May, 2022** and vide Diary No. **SERB/F/345/2022-2023** dated **11 May, 2022**.
- 6. The release amount of **Rs. 2000000/-** (Rupees Twenty Lakh only) will be drawn by the Under Secretary of the SERB and will be disbursed by means of RTGS transaction as per their Bank details given below:

PFMS Unique Code	KADK00003778	
Account Name	AEF AIET RESEARCH AND CONSULTANCY FUND	
Account Number	5268101015512	ąř.
Bank Name & Branch	CANARA BANK Moodbidri, Vidyagiri Branch	
IFSC/RTGS Code	CNRB0005268	1
Email id of A/C Holder	principalaiet08@gmail.com	
Email id of PI	sdgupta@ee.iitb.ac.in	1

(Dr. Anima Johari) Scientist D anima.johari@serb.gov.in

To, Under Secretary SERB, New Delhi

1.	The Principal Director of Audit, A.G.C.R.Building, IIIrd Floor I.P. Estate, Delhi-110002
2.	Sanction Folder, SERB , New Delhi.
3.	File Copy

4.	Dr. Richard Pinto Electronics and Communication Engineering Alva's Institute of Engineering and Technology , Solapur - Mangalore Highway, Shobhavana Campus MIJAR, Moodbidri Email: rpinto@ee.iitb.ac.in Mobile: 919892818760
	Dr. Pradeep Dixit Department Of Mechanical Engineering Indian Institute Of Technology Bombay  Dr. Richard Pinto Electronics And Communication Engineering Alva's Institute Of Engineering And Technology
	Dr. Jayarama A Physics Alva's Institute Of Engineering And Technology (Start date of the project may be intimated by name to the undersigned. For guidance, terms & Conditions etc. Please visit <a href="https://www.serb.gov.in">www.serb.gov.in</a> .)
5.	PRINCIPAL, Alva's Institute Of Engineering And Technology, Solapur - Mangalore Highway, Shobhavana Campus MIJAR, Moodbidri
	(Receipt of Grant may be intimated by name to the undersigned)