

### SHIVAJI UNIVERSITY, KOLHAPUR-416 004 MAHARASHTRA

Colleges and University Development Section

PHONE: EPABX-2609492, 2609145

□ FAX :0091-231-2691533 & 0091-231-2692333

Website: www.unishivaji.ac.in E-mail: stats@unishivaji.ac.in

शिवाजी विद्यापीठ, कोल्हापूर -४१६००४ महाराष्ट्र (महाविद्यालये व विद्यापीठ विकास विभाग)

दुरध्वनी: (ईपीएबीएक्स) २६०९४९२, २६०९१४५

🗆 फॅक्स: ००९१-२३१-२६९१५३३,२६९२३३३,२६९३२९४

Annexure - H

# SHIVAJI UNIVERSITY, KOLHAPUR RESEARCH INITIATION SCHEME

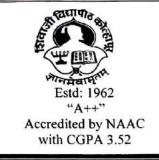
### **Project Completion Certificate**

This is to certify that Mr./Mrs./Ms/Dr./Prof. Dr. Sanjay Shivram Ankushrao of Vivekanand College (Autonomus), Dist-Kolhapur has successfully completed research scheme entitled "Synthesis, Characterization and Properties Polyazomethines for High Temperature Applications" sanctioned by Shivaji University, Kolhapur under Research Initiation Scheme during dt. 07/07/2018 to 06/07/2020. He /She worked as Principal Investigator/Co-Principal Investigator for the project.

Date :- 9 MAY 2022

HOLHAPUR TOLHAPUR

Coordinator,
Research Initiation Scheme
Shivaji University, Kolhapur



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जा.क्र./मवविवि/एसव्हीएम/ ७५ 🍳

दिनांकः **६.9 M**AY 2022

प्रति.

डॉ. संजय शिवराम अंकुशराव, विवेकानंद कॉलेज, कोल्हापुर. जि. कोल्हापुर.

विषय : Research Initiation Scheme या योजनेअंतर्गत व्दितीय वर्षासाठी मंजूर असलेल्या निधीबाबत...

महोदय.

आपणांस Research Initiation Scheme या योजनेअंतर्गत सन २०१७-२०१८ या शैक्षणिक वर्षासाठी **Polyazomethines** High **Properties** "Synthesis, Characterization and Temperature Applications" हा प्रकल्प मंजूर झाला होता. सदर योजनेच्या मार्गदर्शक नियमावलीनुसार एकुण रु. १,५१,५००/- इतक्या अनुदानापैकी आपण सादर करण्यात आलेल्या देयकाच्या आधारे उर्वरित रु. २,३०८/- इतकी रक्कम आपणांस धनादेश क्रमांक ०९५३७४:३०/०३/२०२२ व्दारे पाठवित आहोत.

तसेच, सोबत प्रकल्पपुर्तीचे प्रमाणपत्र पाठवित आहोत.

कळावे.

आपली विश्वास्

महाविद्यालये व विद्यापीठ विकास विभाग शिवाजी विद्यापीठ, कोल्हापूर

सोबत : धनादेश क्रमांक : ०९५३७४:३०/०३/२०२२

प्रत:

मा. प्राचार्य विवेकानंद कालेज, कोल्हापुर. जि. कोल्हापूर.



SHIVAJI UNIVERSITY, KOLHAPUR-416 004 MAHARASHTRA Colleges and University Development Section

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शिवाजी विद्यापीठ, कोल्हापूर -४१६००४ महाराष्ट्र(महाविद्यालये व विद्यापीठ विकास विभाग)

दुरध्वनी: (ईपीएबीएक्स) २६०९०००, २६०९१४५ □ फॅक्स: ००९१-२३१-२६९१५३३,२६९२३३३,२६९३२९४

Ref No.: SU/C&U.D.Section/27/ \75

Date:

TIS MAY 2018

To,

Dr. Sanjay Shivram Ankushrao Dattajirao Kadam Arts , Science & Commerce College, Ichalkaranji, Tal- Hatkanangale , Dist- Kolhapur.

Sub: Your project entitled, "Synthesis, Characterization and Properties Polyazomethines for High Temperature Applications"

Ref: Our Office Circular No: SU / C.&U.D. Section/ UGK/ 347, dt. 11/07/2017.

Sir / Madam,

With reference to your application for financial assistance for scheme under Research Initiation Scheme-2017-2018, I am directed to inform you that the research project entitled "Synthesis, Characterization and Properties Polyazomethines for High Temperature Applications" has been accepted for the financial support under the shceme for the period of two years (2018-2019 to 2019-2020). The total grant for the projects will be ₹.151500/- (₹. One Lakhs Fifty One Thousand Five Hundred Only). The first installment (i.e.advance) of ₹.129000/- (₹. One Lakhs Twenty Thousand Only) will be released after receiving the following documents i.e. University approval letter (Change in Staff), appointment letter, Confirmation Order, Undertaking duly signed by the P.I and Principal in the prescribed format, Acceptance letter (Annex. B), Aadhar Card Zerox, Pan Card Zerox, Passbook zerox (Joint passbook), Advance Stamp Receipt etc.,

### The Details of the funds sanctioned.:

Sr.		Amou	Amount sanctioned in Rs.						
No	Item	1 <sup>st</sup> Year	2 <sup>nd</sup> Year	Total	as First installment				
A)	Recurring								
	1) Books and Journals	₹.0/-	₹.0/-	₹.0/-	₹.0/-				
	2) Hiring Services	₹.5000/-	₹.5000/-	₹.10000/-	₹.5000/-				
	3) Field Work and Travel	₹.0/-	₹.0/-	₹.0/-	₹.0/-				
	4) Chemical and Glassware	₹.15000/-	₹.15000/-	₹.30000/-	15000/-				
	5) Contingency	₹.2500/-	₹.2500/-	₹.5000/-	₹. 2500/-				
B)	Non-recurring								
	*Equipment	₹. 106500/-	₹.0/-	₹.106500/-	₹. 106500/-				
	Total	₹.129000/-	₹. 22500/-	₹. 151500/-	₹.129000/-				

\* Name of the Equipment Equipment: Laptop, Electric Oven (18x18x18) 250 c, and Oil Sealed Vaccum Pump

Kindly submit the above documents with duly signed in prescribed format to Registrar, Shivaji University, Kolhapur, at the earliest so as to release the grant.

Thanking you,

Yours faithfully,

Deputy Registrar,
Colleges and University Development Section

Shivaji University, Kolhapur

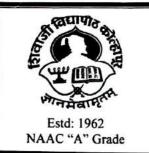
Encl. :- As above

Copy to:

Account (P.G. Bill) Section

 The Principal/Head, Dattajirao Kadam Arts, Science & Commerce College, Ichalkaranji, Tal-Hatkanangale, Dist-Kolhapur

Dr. P. V. Anbhule, Co-ordinator, Department of Chemistry, Shivaii University, Kolhanur



SHIVAJI UNIVERSITY, KOLHAPUR-416 004 MAHARASHTRA

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शिवाजी विद्यापीठ, कोल्हापुर -४१६००४ महाराष्ट्र(महाविद्यालये व विद्यापीठ विकास विभाग)

दरघ्वनी: (ईपीएबीएक्स) २६०९०००, २६०९१४५

🛘 फॅक्स: ००९१-२३१-२६९१५३३,२६९२३३३,२६९३२९४

Ref No.: SU/C&U.D.Section/27/557

Date: 76 1111 7090

To. Dr. Samay Shivram Ankushrao Dattajirao Kadam Arts , Science & Commerce College, Ichalkaranji, Tal- Hatkanangale, Dist- Kolhapur

Sub. :- Grants Release order under Research Initiation Scheme 2017-2018. Sir/Madam,

With reference to above mentioned subject, I am directed to inform you that, the University authorities have approved your research proposal entitled "Synthesis, Characterization and Properties Polyazomethines for High Temperature Applications" under Research Initiation Scheme 2017-2018.

- As per project guidelines, total grants of ₹. 151500/- has been sanctioned to your research project and out of grant ₹. 129000/- sending herewith as a first installment vide cheque bearing number 329244 dt. 7/07/2018.
- The second installment of remaining grants will be released in second year of the project, provided annual progress report is submitted by you on or before the end of the first year of the project.
- The effective date of start of the project should be the date on which grant is credited to you. The total period of the project will be for two years and under no circumstances it will be extended further.

Thanking you,

Yours faithfully,

Deputy Registrar, Shivaji University, Kolhapur.

Encl.: As above.

Copy to:

The Principal/Head of the Department Dattajirao Kadam Arts, Science & Commerce College, Ichalkaranji,

Tal- Hatkanangale, Dist- Kolhapur

"ज्ञान, विज्ञान आणि सुसंस्कार यांसाठी शिक्षण प्रसार" शिक्षणमहर्षी डॉ. बापूजी साळ्खे

Shri Swami Vivekanand Shikshan Sanstha's



# VIVEKANAND COLLEGE (AUTONOMOUS), KOLHAPUR

2130, 'E'Tarabai Park, Kolhapur, Dist. Kolhapur-416 003 Affiliated to Shivaji University, Kolhapur (M.S.)

NAAC Reaccredited: "A" (CGPA 3.24) on 19-01-16 (3rd Cycle) College with Potential for Excellence (Twice) "Star College" by D.B.T. Govt. of India



Estd-: June 1964

58840 Resi.: 0231-2653962 Website: www.vivekanandcollege.org E-mail

Founder Dr. Bapuji Salunkhe D. Lit

President Hon. Chandrakant Dada Patil Minister of Revenue. Relief & Rehabilitation Public works. Govt. of Maharashtra

Chairman Prin. Abhaykumar Salunkhe M.A.

Secretary Prin. Mrs. Shubhangi Gavade M.Sc., B.Ed.

Principal Dr. S. Y. Hongekar M.A., M.Ed., P.G.D.T.E., M. Phil., Ph.D.

19/9/2019

Ref. No. VCK / 973 19-20

To.

The Director,

Board of College and University Development, Shivaji University, Kolhapur.

Subject: Progress Report-1 for the project sanctioned under Research initiation Scheme.

(Dr. Sanjay S. Ankushrao, Chemistry)

Ref.: MVVV/UGK/487, dated 13th Sept. 2019.

Respected Sir,

Please find enclosed herewith two copies of Progress report, Utilization certificate and Statement of expenditure of Minor research project entitled "Synthesis, Characterization and Properties of Processable Polyazomethines for High Temperature Applications" sanctioned to Dr. Sanjay S. Ankushrao, working as an Asst. Professor in Chemistry, Vivekanand College (Autonomous), Kolhapur.

Kindly accept it and do needful.

Thanking you,

Shivali University Kolhapur

Yours faithfully,

(Dr. S. Y. Hongekar)

PRINCIPAL Vivekanand College

Kolhapur.

Annual Report of the work done on the Research Project (Report to be submitted within 2 months after completion of each year).

- 1) Project report No. 1st
- 2) University Reference No.:
- 3) Period of report: from 22<sup>nd</sup> August 2018 to 21<sup>st</sup> August 2019.
- 4) Title of research project: Synthesis, Characterization and Properties of Processable
  Polyazomethines for High Temperature Applications.
- 5) (a) Name of the Principal Investigator: Dr. Sanjay Shivram Ankushrao
  - (b) Dept. and College where work has progressed: Dept. of Chemistry, Vivekanand

College (Autonomous), Kolhapur.

- 6) Effective date of starting of the project: 22<sup>nd</sup> August 2018.
- 7) Grant approved and expenditure incurred during the period of the report:
  - a. Total amount approved Rs.: 1,29,000/- (One Lakh twenty nine thousand only)
  - b. Total expenditure Rs.: 1,23, 508/- (One Lakh twenty three thousand five hundred eight only)

c. Report of the work done: (please see Annexure-1)

1)	Brief objective of the project	Annexure-1
2)	Work done so far and results achieved and publications, if any, resulting from the work (Give details of the papers and names of the journals in which it has been published or accepted for publication	Nil
3)	Has the progress been according to original plan of work and towards achieving the objective? if not, state reasons	Yes, progress of synthesis is according to plan that we decided.
4)	Please indicate the difficulties, if any, experienced in implementing the project.	Uptill no any much more difficulties
5)	If project has not been completed, please indicate the approximate time by which it is likely to be completed. A summary of the work done for the period (Annual basis) may please be sent to the University on a separate sheet.	Around 1 yr will require to complete all the work.
6)	If the project has been completed, please enclose a summary of the findings of the study. Two bound copies of the final report of work done may also be sent to the University.	Incomplete work
7)	Any other information which would help in evaluation of work done on the project. At the completion of the project, the first report should indicate the output, such as (a) Manpower trained (b) Ph. D. awarded (c) Publication of results (d) other impact, if any	Nil

Signature of the Principal Investigator

Signature of the REGIFFE Lector / Head of University Department

Vivekanand College Kolhapur

Recommendation of the expert committee about continuation of the project after 1<sup>st</sup> year.

### Annexure-1

### 1. Objective of the Work:

Our synthetic research effort is directed towards structural modifications designed to disturb regularity and chain packing thus providing better processability / solubility to the polymers and to determine various properties and characteristics of synthesized polymers for its applications as high performance semiconducting material. The approach adapted in the present research work for the synthesis of processable Polymers involves synthesis of difunctional monomers such as diamines or dialdehyde containing cardo or pendant moiety.

### 2. Progress of Work: 1st Year

So, for the synthesis of difunctional diamine monomers, we have synthesised intermediates required to synthesize difunctional diamine monomers by relatively inexpensive chemical routes as below.

The progress of work is as,

- a. Purchased Equipments, glass wares and Chemicals.
- b. Synthesized two different bisphenols containing cyclopentylidene and cyclohexylidene cardo group.
- c. Further, two different ether containing diketone intermediates have synthesized from bisphenols by using simple organic transformations.

### 3. Future Work:

The Diketone intermediates will be finally converted into diathizole diamine monomers. Furthermore these monomers will be used as precursors for the synthesis of co-polyazomethines. The synthesized co-polyazomethines will undergo characterization to check its applications as high performance semiconducting material.

Dr. Sanja<del>y S. A</del>nkushrao

Principal Investigator

### Utilization certificate

Certified that, the grant of Rs. 1, 29, 000/- (Rupees One Lakh twenty nine thousand only) received from the University under the scheme of support for Research Project entitled "Synthesis, Characterization and Properties of Processable Polyazomethines for High Temperature Applications" vide Shivaji University letter No. Ref. No.: SU/C & U. D. Section/27/175 dated 5<sup>th</sup> May 2018 and Ref. No. SU/C & U. D. Section/27/557 dated 26<sup>th</sup> July, 2018. The grant Rs. 1, 23, 508/- (Rupees One Lakh twenty three thousand five hundred eight only) has been utilized for the purpose for which it was sanctioned and in accordance with the terms and conditions laid down by the university.

Signature of the
Principal Investigator
(Dr. Sanjay S. Ankushrao)

Principal/Director/Head of July Croples artment

Statement of Expenditure in respect of Research Project

1) Name of Principal Investigator : Dr. Sanjay Shivram Ankushrao

2) Name of College/Institution : Vivekanand College (Autonomous), Kolhapur.

3) University approval No. and Date: Ref. No.: SU/C & U. D. Section/27/175 dated 5<sup>th</sup> May 2018 and SU/C & U. D. Section/27/557 dated 26th July, 2018.

4) Title of the Research Project : Synthesis, Characterization and Properties of Processable Polyazomethines for High Temperature Applications.

5) Effective date of starting the project: 22<sup>nd</sup> August 2018

6) (a) Period of Expenditure: From 22<sup>nd</sup> August 2018 to 21<sup>st</sup> August 2019

(b) Details of Expenditure

Sr. No.	Item	Sanctioned Amount (Rs.)	Expenses incurred (Rs.)
A)	Non-Recurring Component	540	
i)	Equipments	1, 06, 500/-	1, 05, 200/-
ii)	Books and Journals	Nil	Nil
B)	Recurring component		
i)	Hiring Services	5,000/-	1, 000/-
ii)	Field Work and Travel	Nil	Nil
iii)	Chemicals and glassware	15,000/-	14962/-
iv)	Contingency (including special needs)	2, 500/-	2346/-
	Total (Rs)	1,29,000/-	1,23, 508/-
		(One lakh Twenty	(One Lakh twenty three thousand
		nine thousand only)	five hundred eight only)

(c) (1) As a result of check or audit objective, some irregularity is noticed, at a later Date, action will be taken to refund, adjust or regularize the objected amounts.

(2) It is certified that the grant of Rs. 1, 29, 000/- (Rupees One Lakh twenty nine thousand only) received from the University under the scheme of support for Research Project entitled "Synthesis, Characterization and Properties of Processable Polyazomethines for High Temperature Applications", vide University letter No. SU/ C & U. D. Section/27/557 dated 26th July, 2018. The grant of Rs. 1, 23, 508/- (Rupees One Lakh twenty three thousand five hundred eight only) has been utilized for the purpose for which it was sanctioned and in accordance with the terms and conditions laid down by the University.

Principal Investigator

Principal/Director/ Head of the Palversity Department Vivekanand College

Kolhapur.

Statutory Auditor

Sachin K. Sohani F.C.A.

Chartered Accountants Tr No.102487

### INVOICE/ BILL

# Bio Treasure India

# Scientific Center

An ISO 9001:2008 Certified Company

Address: 362/3, Salokhe Lane, Kalamba turf Thane, Tal. Karveer, Dist. Kolhapur, 416007

Cell No.: 9881762447, 9923412447 Office: 0231-6614772

# (Suppliers of All Types of Scientific Material)

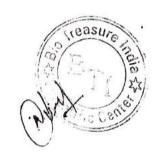
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Kolhapur							
	· ·		Your Ref. N	0. :	D	oate ·	
No.	Description	Make	Unit	Each Unit	t	Amount	
			;=	Rs.	P <sub>S</sub> .	Rs.	Ps.
.1	Vacuum pump ½ HP Power (Suction Pump)	Labline	01	35864	00	35864	00
2	Hot air Oven 18 x 18 x 18 S.S. with digital temp. controller	Meta-Lab	01	23458	00	23458	00
3	:						
4	· · ·	P				•	
5							
6							
7							
			•	TOTAL		59322	00
	1 .			CGST	9%	5338	98
	1			SGST	9%	5338	98
	1		-	TOTAL		69999	96
				Rounded	+		04
				TOTAL		. 70000	00

- 1. Interest at the rate of 18% will be charged on bills not paid within 30 days.
- 2. All Payment should be made by cross of order cheque only.
- Subject to Kolhapur Jurisdiction.

### Rupees in Word- Seventy thousand only.

"I/We hereby certify that my/our registration certificate under the Maharashtra Value Added Tax Act 2002 is in force on the date on which the sale of the goods specified in this invoice I made by my/us and that the transaction of sale covered by this Tax Invoice has been effected by me/us and it shall be accounted for in the turnover of sales while filling of return and the tax, if any payable on the sale has been paid or shall be paid"



# **Photon Computers**

D 8-9, Mahalaxmi, Chambers, Near Central S.T. Stand, Kolhapur - 416 001. Ph No. 0231 2661211, 9371661211, e mail : photoncomp@yahoo.com

### TAX INVOICE

To, Sanjay Shivram Ankushrao
Dept Of Chemistry,
Vivekanand College, Klhapur.

DC No.

Invoice No.: PC/07/11

: 17-07-2019

8.	Parties GSTIN :	з, кнари.		Date		
Sr.	· · · · ;	Perticulars '	HSN Code	Qty.	Rate	Amount
1	L/T HP 15-DA03 S/N:CND9214R7S	27TU (I3 7th/4GB/1TB/15.6/W10	8471	1	28,983.07	28,983.07
2	Carry Case L/T	*	4202	1	847.46	847.45
3	QH Int Sec. 1/3 Key:E3110-8W2CA	3,70				
•		10 No.				*
		· •				×
			-			201
•						
	1		Total Qty.	2.00	Gross Total	29,830.52
	<del></del>	•			SGST 9 %	2,684.74
	· · · · ·				CGST 9 %	2,684.74
Re	in words :- Thirty	Five Thousand Two Hundred Or	nlv		Grand Total	35,200.00

I/we here by certificate that my/our registration certificate under the Maharashtra Value Added Tax Act 2002 is in force on the date on which the sale of the goods specified in this tax invoice is made by me/us and that the transaction of the sale covere by this tax invoice has been effected by me/us and it shall be accounted for in the turnover of sales while filing of return and the due tax if any payable on the sale has paid or shall be paid

\* Bills not paid within 7 days will be subject to interest @ 18 % P.A.\* Subject to Kolhapur Jurisdiction

GSTIN: 27AAGPU7941L1ZY - W.E.F. 01)07/2017

For Photon Computers

Recievers Signature

Printed On Wings

Authorised Signatory

# SOLAPUR UNIVERSITY

Receipt (F.Y.: 2019 - 2020)

Dated

24-Apr-2019

Exam Month/Year Seat No

Amount 1,000.00

Remarks

UTR No MAHBH19114504377

Particulars 1H NMR

Cantre Name Address Received From

Saniay Ankushrao

Number

730

IMP One Thousand Only

Grand Total

₹ 1,000.00

Any describancy in the above receipt may kindly be brought to the notice of Cashler within two days

# INVOICE/ BILL

# Bio Treasure India

# Scientific Center

An 180 9001:2008 Certified Company

Address: 362/3, Salokhe Lane, Kalamba turf Thane, Tal. Karveer. Dist. Kolhapur. 416007

Cell No.: 9881762447, 9923412447 Office: 0231-6614772

# (Suppliers of All Types of Scientific Material)

GSTIN: 27CPOPS7254D1ZE .

To.				101 - 202-0			
Dr. Sa	anjay S. Ankushrao	BTI Bill No.	: 148	Date:	21-01-2019	9.5	
	of Chemistry .		DTI D C No	. 00	Date:	21-01-2019.	
	canand College		BTI D.C. No.	; 00	Date.	21-01-2017.	
Kolha	apur		Your Ref. No	b. 1	Date		
						A aunt	
No.	Description	Make	Unit	Each Unit Rs.	Ps.	Amount Rs.	Ps.
1	Terephthaldehyde	Sigma	100gm	3220	00	3220	0
2	3-mecraptopropaonic acid	Spectro	100ml	990	00	990	0
3	Cyclopentanone	Spectro	500ml	1050	00	1050	0
4	4-fluroacetophenone	Spectro	25gm x 2	600	00	1200	0
5	Iso-phthaldehyde	Spectro	25gm	1050	00	1050	0
6	3 neck RB Flask 100ml	J-sil	03	390	00	1170	(
7	3 neck RB flask 250ml	J-sil	02 ·	420	00	840	
8	R.B. Flask 250ml	J-sil	01	140	00	140	(
9	R. B. Flask 100ml	J-sil	01	100	00	· 100	(
10	Glass trough	Regular	01 .	350	00	350	(
11	Magnetic needle		03	200	00	600	0
12	M-phenylene diamine	Sigma	100gm	1547	00	- 1547	(
13	G. pipette 5ml	J-sil	01 .	. 120	00	120	(
14	G. Pipette 10ml	J-sil	01	183	00	183	(
15	G. Pipette 1ml	J-sil	01	120	00	120	(
-				TOTAL		12680	(
				CGST	9%	1141	2
	1 7 7:			SGST	9%	1141	2
				TOTAL		14962	4
	1			Rounded	-		2
				TOTÁL		14962	(

1. Interest at the rate of 18% will be charged on bills not paid within 30 days.

2. All Payment should be made by cross of order cheque only.

3. Subject to Kolhapur Jurisdiction.

### Rupees in Word Fourteen thousand nine hundred sixty two only

"I/We hereby certify that my/our registration certificate under the Maharashtra Value Added Tax Act 2002 is in force on the date on which the sale of the goods specified in this invoice I made by my/us and that the transaction of sale covered by this Tax Invoice has been effected by me/us and it shall be accounted for in the turnover of sales while filling of return and the tax, if any payable on the sale has been paid or shall be paid



### INVOICE

### **Soodluck Stationers**

595, D, Bazargate, Kolhapur - 416002 GSTIN/UIN: 27AADPW4787H1Z2

State Name: Maharashtra, Code: 27 Contact: 0231-2548630,7385550561

E-Mail: goodluckstationers9@gmail.com

Dr Sanjay S. Ankushrao Vivekanand College Kop

State Name State Name : Maharashtra, Code : 27 Place of Supply : Maharashtra

Invoice No	Dated 13-Jul-2019
	Mode/Terms of Payment - 30 Days
Supplier's Ref.	Other Reference(s)
Buyer's Order No.	Dated

Terms of Delivery

SI No.		HSN/SAC	GST Rate	Quantity	Rate	per	Disc. %	Amount .
1	A4 Paper	4820	12 %	5.00 rim	170.00	rim		850.00
2	FILES 12 F Chain File	82031000	18 %	1 NOS	120.00	NOS		. 120.00
3	FILES Aqva D Ring File	82031000	18 %	4 NOS	55.00	NOS	•	220.00
4	APSARA PENCIL	9608	12 %	1 pkt	35.71	pkt		35.71
5	10 NO STAPLER	84729010	18 %	1 NOS	29.66	NOS		29.66
6	Hp-45 Stapler 250mrp	8472	18 %	1 NOS	166.10	NOS		166.10
7	10 No Pin	8305	18 %	10 pkt	, 5.08	pkt		50.80
8	24/6 Kangaro Pin	8305	18 %	5 pkt	, 11.02	pkt	•	55.10
9	Hi-Liter Orange	9608	12 %	2 NOS	15.18	NOS		30.36
10	OHP Markar Pen	9608	12 %	2 NOS	7.14	NOS		14.28
11	Permanent Marker Camel	9608	12 %	1 NOS	14.29	NOS		14.29
12	Cello Gripper Pen	9608	12 %	1 pkt	26.79	pkt		26.79

continued ...

Pritact : 0231-2548630,7385550561 Mail : goodluckstationers9@gmail.com	Involce No. 752	Dated 13-Jul-2019
State Name: Maharashtra Code 27	•	Mode/Terms of Payment 30 Days
E-Mail: goodluckstationers9@gmail.com	Supplier's Ref.	Other Reference(s)
Buyer Dr Sanjay S. Ankushrao	Buyer's Order No.	Dated

Vivekanand College Kop Staté Name

: Maharashtra, Code : 27

Place of Supply : Maharashtra

Terms	of	De	lvery

SI No.	Description of Goods	HSN/SAC	GST Rate	Quantity	, Rate	per	Disc. %	Amount
13	FILES Rajashree Spring File	82031000	18 %	12 NOS	26.00	NOS		312.00
	Foam Tape Box Packing	4811	18 %	2 pkt	20.00	pkt		40.00
15	Punching Machine DP 280	8472	18 %	1 NOS	55.08	NOS		55.08
16	Markar Pen 20mrp Whitner Pen		12 %	1 NOS	. 17.86	NOS		17.86
	14.							2,038.03
	CGST	-						153.75
	SGS1 Round Of	7						153.75 0.47
					e.			
	* 1							¥.
				<u>:</u> :				
								1.82
		•			•			
_	Tota	1				AA	$\mathcal{O}$	Rs 2,346.00

Amount Chargeable (In words)

INR Two Thousand Three Hundred Forty Six Only

Company's Bank Details

Bank Name

: The Kolhapur Urban Co-Op Bank- 682

A/c No. : 00031101000682

Branch & IFS Code: Gangavesh & HDFC0CKUCBL

for Goodluck Stationers

E. & O.E

We declare that this invoice shows the actual price of the goods described and that all particulars are true and correct.

Dated 13-Jul-2019

oice No. 752

**Goodluck Stationers** 

595, D, Bazargate, Kolhapur - 416002. GSTIN/UIN: 27AADPW4787H1Z2 State Name: Maharashtra, Code: 27 Contact: 0231-2548630,7385550561

Contact: 0231-2548630,7385550561 E-Mail: goodluckstationers9@gmail.com

Party: Dr Sanjay S. Ankushrao Vivekanand College Kop

·State Name : Maharashtra, Code: 27

Place of Supply: Maharashtra

HSN/SAC	Taxable	Central Tax		Sta	T	Total	
	Value	Rate	Amount	Rate	Amount	Tax	Amount
4820 82031000	- 850.00 652.00	6% 9%	51.00 58.68	6% 9%	51.00 58.68		102.00
9608 .	121.43	6%	7.29	6%	7.29		14.58
84729010 8472	29.66	9%	2.67	. 9%	2.67	**	5.34
8305	221.18	9% 9%	19.91 9.53	9% 9%	19.91 9.53		19.06
4811	40.00	9%	3.60	9%	3.60		7.20
	17.86	6%	1.07	6%	1.07	97010	2.14
Total	2,038.03		153.75		153.75		307.50

Tax Amount (in words): INR Three Hundred Seven and Fifty paise Only

for Goodluck-Stationers

Authorised Signatory

Jr. College Recog. No. H.S.C./1074/R-1/DT: 8-8-1976 Jr. College Code No. 23-09-002

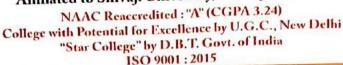
Jr.College U.Dise No.27341301006

" ज्ञान, विज्ञान आणि सुसंस्कार यांसाठी शिक्षण प्रसार" शिक्षणमहर्षी डॉ. बापूजी साळुंखे

Shri Swami Vivekanand Shikshan Sanstha's

# VIVEKANAND COLLEGE, KOLHAPUR (AUTONOMOUS)

2130, 'E'Tarabai Park, Kolhapur, Tal. Karveer, Dist. Kolhapur-416 003 Affiliated to Shivaji University, Kolhapur (M.S.)





Ph.: 0231-2658612, 2658840 Fax: 0231-2658840 Resi.: 0231-2653962 Website: www.vivekanandcollege.org E-mail: info@vivekanandcollege.org

Founder Dr. Bapuji Satunkhe President
Hon. Chandrakant Dada Patil

Chairman Prin. Abhaykumar Salunkhe Secretary
Prin. Mrs. Shubhangi Gavade
M.Sc., B.Ed.

Principal Dr. R. R. Kumbhar M.Sc. M.Phil.,Ph.D.

Date: 07.6.201

Ref No. VCKI 147/2021-22

To, The Director, Board of College and University Development, Shivaji University, Kolhapur.

Subject: Regarding Progress Report-2, Utilization certificate, Statement of expenditure, Annexure G & H for the project sanctioned under Research initiation Scheme. (Dr. Sanjay S. Ankushrao, Chemistry)

Ref.: मविविवि / युजीके /56, dated 14th May 2021.

Respected Sir,

With reference to subject cited above, find herewith two copies each of Progress report, Utilization certificate, Statement of expenditure, Annexure G & H of Minor research project entitled "Synthesis, Characterization and Properties of Processable Polyazomethines for High Temperature Applications" sanctioned to Dr. Sanjay S. Ankushrao, working as an Asst. Professor in Chemistry, Vivekanand College, Kolhapur (Autonomous). Kody issue balanced automatical auto

Thanking you,

de

FOI REBISTION KOlhsour

Yours faithfully,

(Dr. R. R. Kumbhar)

PRINCIPAL
Vivekanand College
Kolhapur

Annual Report of the work done on the Research Project (Report to be submitted within 2 months after completion of each year).

- 1) Project report No. 2
- 2) University Reference No.:
- 3) Period of report: from 22<sup>nd</sup> August 2019 to 21<sup>st</sup> August 2020.
- 4) Title of research project: Synthesis, Characterization and Properties of Processable Polyazomethines for High Temperature Applications.
- 5) (a) Name of the Principal Investigator: Dr. Sanjay Shivram Ankushrao
  - (b) Dept. and College where work has progressed: Dept. of Chemistry, Vivekanand

College, Kolhapur (Autonomous).

- 6) Effective date of starting of the project: 22<sup>nd</sup> August 2018.
- 7) Grant approved and expenditure incurred during the period of the report:
  - a. Total amount approved Rs.: 22500/- (Twenty-two thousand five hundred only)
  - b. Total expenditure Rs.: 7800/- (Seven thousand eight hundred only)

c. Report of the work done: (please see Annexure-1)

1)	Brief objective of the project	Annexure-1
2)	Work done so far and results achieved and publications, if any, resulting from the work (Give details of the papers and names of the journals in which it has been published or accepted for publication	Manuscript submitted to UGC care listed Journal-Journal of Advanced Scientific Research (Submission id: JASR_31052021_3)
3)	Has the progress been according to original plan of work and towards achieving the objective? if not, state reasons	Yes, progress of synthesis of monomer and polymers was according to plan that we decided.
4)	Please indicate the difficulties, if any, experienced in implementing the project.	Nil
5)	If project has not been completed, please indicate the approximate time by which it is likely to be completed. A summary of the work done for the period (Annual basis) may please be sent to the University on a separate sheet.	completed
6)	If the project has been completed, please enclose a summary of the findings of the study. Two bound copies of the final report of work done may also be sent to the University.	Project work details attached in Annexure-1
7)	Any other information which would help in evaluation of work done on the project. At the completion of the project, the first report should indicate the output, such as (a) Manpower trained (b) Ph. D. awarded (c) Publication of results (d) other impact, if any	Nil

Signature of the Principal Investigator

Signature of the Principal /Director / Head of University Department

PRINCIPAL
Vivekanand College
Kolhapur

### **Utilization** certificate

Certified that, the grant of Rs. 22500/- (Twenty two thousand five hundred only) sanctioned from the University under the scheme of support for Research Project entitled "Synthesis, Characterization and Properties of Applications" High Temperature **Polyazomethines** for vide Shivaji University letter No. Ref. No.: SU/C & U. D. Section/27/175 dated 5th May 2018 and Ref. No. SU/ C & U. D. Section/27/557 dated 26th July, 2018. The grant Rs. 7800/- (Seven thousand eight hundred only) has been utilized for the purpose for which it was sanctioned and in accordance with the terms and the university. conditions laid down by

Signature of the
Principal Investigator
(Dr. Sanjay S. Ankushrao)

Signature of the

Principal/Director/Head of University Department

PRINCIPAL
Vivekanand College
Kolhapur

Sidd K. Sohap.

Sachin K. Sohani

Chartered Accountants

Statement of Expenditure in respect of Research Project

1) Name of Principal Investigator : Dr. Sanjay Shivram Ankushrao

2) Name of College/Institution : Vivekanand College, Kolhapur (Autonomous).

3) University approval No. and Date: Ref. No.: SU/C & U. D. Section/27/175 dated 5th

May 2018 and SU/ C & U. D. Section/27/557 dated 26th July, 2018.

4) Title of the Research Project : Synthesis, Characterization and Properties of Processable Polyazomethines for High Temperature Applications.

5) Effective date of starting the project: 22<sup>nd</sup> August 2018

6) (a) Period of Expenditure: From 22nd August 2019 to 21st August 2020

(b) Details of Expenditure

Sr. No.	Item	Sanctioned Amount (Rs.) (2 <sup>nd</sup> Year)	Expenses incurred (Rs.)
A)	Non-Recurring Component		
i)	Equipments	Nil	Nil
ii)	Books and Journals	Nil	Nil
B)	Recurring component		
i)	Hiring Services	5,000/-	5800/-
ii)	Field Work and Travel	Nil	Nil
iii)	Chemicals and glassware	15,000/-	Nil
iv)	Contingency (including special needs)	2, 500/-	2000/- (1st & 2nd Year Financial Audit)
	Total (Rs)	22,500/-	7800/-
		(Twenty two thousand	(Seven thousand eight hundred
•		five hundred only)	only)

- (c) (1) As a result of check or audit objective, some irregularity is noticed, at a later Date, action will be taken to refund, adjust or regularize the objected amounts.
- (2) It is certified that the grant of Rs. 22500/- (Twenty-two thousand five hundred only) sanctioned from the University under the scheme of support for Research Project entitled "Synthesis, Characterization and Properties of Processable Polyazomethines for High Temperature Applications", vide University letter No. SU/ C & U. D. Section/27/557 dated 26th July, 2018. The grant of Rs. 7800/- (Seven thousand eight hundred only) has been utilized for the purpose for which it was sanctioned and in accordance with the terms and conditions laid down by the University.

Principal nyestigator

Principal/Director PRINCIPAL University Department Vivekanand College
Kolhapur

Statulory Auditor

Sachin K. Solman

# Proforma for submission of Information at the time of submitting the Final Report of the Work Done on the Project (To be submitted within two months after completion of project period)

1	Name & Address of the Principal Investigator	Dr. Sanjay Shivram Ankushrao, Department of Chemistry, Vivekanand College, Kolhapur.
2	Name & Address of the Institution / Department	Vivekanand College, Kolhapur (Autonomous)
3	University Approval No. & Date	Aff.T.3/SRS/13163, 26 <sup>th</sup> Feb 2015 Aff.T.3/SDM/28, 29/11149, 15 <sup>th</sup> Oct 2018.
4	Date of Implementation	August 2018
5	Tenure of the Project	2 yrs
6	Total Grant Allocated	1,51,500/- (for 2 yr)
7	Total Grant Received	1,29,000/- (for 1 <sup>st</sup> Year)
8	Final Expenditure	(Ist Year-1,23,508/- + IInd Year-7800/-)= 1,31,308/-
9	Title of the Project	Synthesis, Characterization and Properties of Processable
		Polyazomethines for High Temperature Applications
10	Objectives of the Project	Our synthetic research effort was directed towards structural modifications designed to disturb regularity and chain packing thus providing better processability / solubility to the polymers. The approach adapted in the present research work for the synthesis of processable Polymers involved synthesis of difunctional monomers such as diamines containing cardo and pendant moiety as well as hetero unit in the backbone. So difunctional monomers was designed and synthesized by relatively inexpensive chemical routes with an objective to obtain processable polymers with specific properties for high temperature applications.
11	Whether Objectives were achieved (Give Details)	Yes
12	Summary of the Findings / Publications (In 500 Words)	A series of CHPAMs were prepared by the high-temperature solution polycondensation of a novel diamine precursor 1,1-bis[4-(2-aminothiazole)-3-methyl phenyl]cyclohexane (BATMPC), with varying proportion of aromatic dialdehydes

	(45)	comonomer [1,3 linkage isophthalaldehyde (IPA) and 1,4 linkage terephthalaldehyde (TPA)]. Inherent viscosities of
		these CHPAMs were in between the 0.27 and 0.35 dL/g indicating built-up of moderate molecular weights. These
		CHPAMs revealed solubility in many polar aprotic solvents
		without appreciable loss in thermal stability, so it is possible to process these polyazomethines in polar aprotic solvents. The
		existence of -CH=N- (azo linkage) in the CHPAMs framework was committed by UV-Vis spectra. The 10% weight loss in
		nitrogen range from 380°C to 415°C indicates that these
		polyazomethines are suitable for high temperature applications.  The glass transition temperature of polyazomethines (220°C to
	,	241°C) can allow processing of polymers above 220°C. X-ray
		diffraction study shows amorphous nature of these polymers.
13	Possible Applications (Give Details) Principal	Semiconducting material for high temperature applications

Principal Investigator (Dr. Sanjay Shivram Ankushrao)

Principal/Director/ Head of the University Department
Vivekanand College
Kolhapur

# Shivaji University, Kolhapur Research Initiation Scheme

Principal Investigator: Dr. Sanjay S. Ankushrao,

Department of Chemistry,

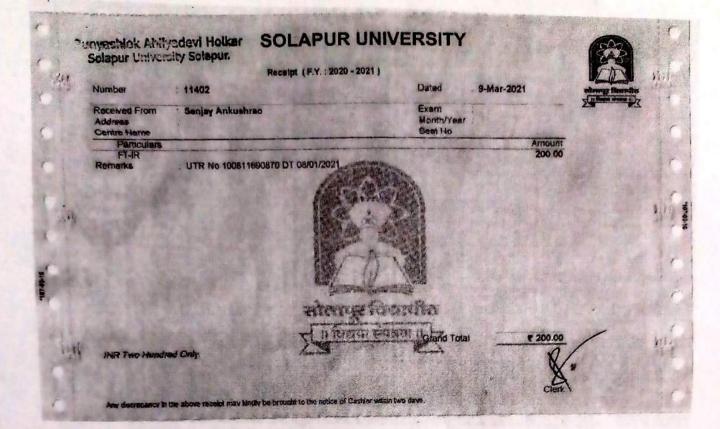
Vivekanand College, Kolhapur (Autonomous)

Billing Details (2nd Year)

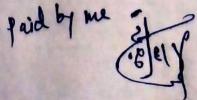
Sr. No.			Receipt No.	
1	NMR & IR Analysis	900/-	4061	
2	FTIR Analysis	200/-	11402	
3	XRD Analysis	1600/-	11403	
4	FTIR Analysis	100/-	432	
5	NMR Analysis	1200/-	90008400	
6	Thermal Analysis	1800/-	58634	
7.	C.A. Audit (1st & 2nd Year)	2000/-		
8.				
		Total	7800/-	

Punyashlok Ahilyaday Holkapur UNIVERSITY
Solapur University Solapur Receipt (F.Y.: 2020 - 2021) 16-Dec-2020 Dated Exam Sanjay Ankushrao Received From Month/Year Seat No 700.00 1H NMR : UTR NO - 034914673112 STREET, THE PARTY OF Grand Total ₹ 900.00 INR Nine Hundred Only

paidby me







### BIII BOOK

Anekant Education Society's

# JAYSINGPUR COLLEGE, JAYSINGPUR.

Accredited at 'A' Grade (NAAC)

### DST - FIST Analytical Instrumentation Lab

Shirot Road, Jaysingpur Tal. Shirof, East. Kolhapur (Maharashtra) Tel. (02322) 225381 Fax: (02322) 226481

M. Dr. Sanjay S. Ankushrad Bill No. 43:

Vivekanand College, Kalhapuroute: 27/01/2020

No.	Particulars	Quantity	Rate	Amount Rs Pr
1	FTER	10	100	100 6
				(
				//
			No. of the	
			loid	100 30

Rs. in Words One hundred rupees only!

Customer Sign.

Dane

For - DST - FIST Analytical Instrumentation Lab

paidbyme of 199



### SHIVAJI UNIVERSITY, KOLHAPUR

### **Bank Receipt**

: 58634

Receipt Date

: 14/03/2021

Received From : DR.SANJAY S ANKUSHRAO

Deposit In A/c : A/c - 1 UCO Bank Shivaji University

Mode of Inst.

: By Cash

Drawee Bank

: VIDYANAGAR

1	Particular	A.8.R.5	1,800.00
	Receipt against Scanning of	7.0.11.0	1 1000
	Total	(Rs.)	1,800.00

Rupees ONE THOUSAND EIGHT HUNDRED ONLY

**Depositor Copy** 

**Authorised Signatory** 

contact no-9096070345

Note : The Receipt is subject to the realisation of Cheque

Tax Invoice

Indian Institute of Science C.V. Raman Avenue, Bangalore , 560012

GSTIN: 29AAATI1501J2ZV

Sales Order Number : 10004238

interior impay present

Department : NMR Research Center

Telephone : 080 22932536

Telefax

: office.nmr@iisc.ac.in

E-mail

: 18.01.2021

Invoice Date
Sales Order Date

: 11.01.2021

**Customer Details** 

**Invoice Number** 

5100002571 PAN No: ALOPA8731H

PAN No: ALOPA8731H
Dr. Sanjay Shivram Ankushrao,
Dept. of Chemistry,
VIVEKANAND COLLEGE,

KOLHAPUR - 416003 ,Maharashtra,India

: 90008400

Tel: Fax:

Email:

Billing Details

5100002571 PAN No: ALOPA8731H Dr. Sanjay Shivram Ankushrao,

Dept. of Chemistry, VIVEKANAND COLLEGE,

KOLHAPUR - 416003 ,Maharashtra,India Tel :

Tel : Fax: Email : GSTN :

Item no.	Item Code / SAC Code / Item Description	Qty	иом	Base Price	CGST%	SGST%	IGST%	Total Amount
000010	6000000020/998346/NMR Spectra Analysis-Liquid	1,50	HR	677.96	0.00	0.00	18.00	1 017

Total Base Price	1,017
CGST Amount	0
SGST Amount	0
IGST Amount	183
Grand Total	1,200

Amount in words: ONE THOUSAND TWO HUNDRED RUPEES

Shear

**AUTHORIZED SIGNATORY** 

निरसीय निर्धायक Financial Controller भारतीय विज्ञान संस्थान Indian Institute of Science संगत्म /BENGALURU - 580 व्यक्त

paid by me

# chin K. Sohani

# nartered Accountants

Office: Sai Sankul Appt. Flat No 02, 2282 B, Kolhapur. Ph- 0231-2625538

Resi: Flat No 605, Indraprastha Tower, Sambahaji Nagar, Kolhapur. Mob.: 9371100403 Email: sohani\_ca@yahoo.co.in

M/s. Dr. Sanjay Shivann Ankushama No.: 036

Asoft Professor Dept of Chemistry:

Vivekahand College Vallation Date: 04/06/2029

Sr.No.	Particulars	Amount in Rs.
1)	Consultancy Fees	·
2)	Project Report	
3)	Tax Audit Fees	
4)	GST Autit Fees Utilisation Costfilale (ILII year)	2000-00
5)	Statutary Audit Fees	
6)	I. T. Return	
7) .	GST Return Filling	
8)	Others	1
Rupees	in Words:	2000500

Sachin K. Sohani STATE BANK OF INDIA IFSC COAD: SBIN0005550 A/C No.: 33807721502

For Sachin K. Sohani

Act of the