Sir C. V. Raman, KT., M.A., PH.D., D.SC., LL.D., F.R.S., N.L.

210, BOWBAZAR STREET,
CALCUTTA.

14th February, 1932.

I have great pleasure in supporting the candidature of Mr. K.S. Krishnan for the Professorship of Physics at the Andhra University. The confidence I feel in his capacity for distinguishing himself in that position has a very solid basis of experience. For five years from 1923 to 1928, he was the foremost of the researchers working under me at the Indian Association for the Cultivation of Science at Calcutta. His numerous experimental and theoretical researches built up not only his own reputation, but also the reputation of the laboratory, and opened out several new and fruitful avenues of thought which are still being followed up at the present time. In the investigations which resulted in the discovery in February 1928 of a new radiation effect and in the following up of that discovery, Krishnan played a leading part, and his name appears jointly with mine in most of the publications from the laboratory during that exciting period. If the Nobel award for Physics made in 1930 had been based on the record of the year 1928 alone, instead of on the entire work on the scattering of light done at Calcutta from 1921 onwards, Krishnan would in justice have come in for a share of the Prize.

Since December 1928, Mr. Krishnan has been Reader in Physics at the Dacca University. I have heard very good accounts of his work in that capacity, and he has in particular been very

Sir C. V. Raman, KT., M.A., PH.D., D.SC., LL.D., F.R.S., N.L.

210, BOWBAZAR STREET,
CALCUTTA.

successful in initiating and guiding research work by M.Sc. students. Recently, a research student of mine at Calcutta got into difficulties with his work, and was deputed by me to Dacca to consult Mr. Krishnan, and he has come back with all his difficulties solved for him. Recently also, I have had the pleasure of seeing an elaborate memoir on Magnecrystallic Action by Krishnan and his students at Dacca which is now in course of publication. The memoir represents several years of sustained effort devoted to the solution of a special problem of great difficulty and interest, and exhibits most unusual thoroughness, skill and perseverance besides describing results of great value.

The Andhra University may feel assured that in selecting Mr. Krishnan for the Chair, they would be making the best possible choice.

C. V. Raman

UNIVERSITY COLLEGE OF SCIENCE

92, UPPER CIRCULAR ROAD,
CALCUTTA

August 8, 1932.

FROM

SIR C. V. RAMAN, KT., M.A., D. SC. (HON.) F. R. S., N.L. etc.
PALIT PROFESSOR OF PHYSICS.

Mr. K. S. Krishnan, Reader in Physics at the Dacca University informs me that he is a candidate for the Carnegie Scholarship for study in Great Britain. In very warmly supporting his candidature and recommending his selection for the award, I desire to point out that his qualifications for it are of the highest character. He has been notably successful as a teacher and as a researcher, and his investigations during the past ten years have earned for him a conspicuous position amongst the present generation of physicists in India. I had the pleasure recently of communicating to the Royal Society for publication in its Philosophical Transactions, a magnificient memoir describing the results of the work of Krishnan and his students at Dacca on the magnetic properties of crystalline solids. These results are of great interest and importance, and I understand they are to be followed up in a second memoir now under preparation. It will be greatly to the advantage of Physics in India that Krishnan should be given an opportunity of meeting his scientific colleagues in Europe and of working for some time in their midst. I can hardly conceive of a better choice for the award of the studentship than Mr. Krishnan .

C. V. Raman

Diplom-Physiker Werner L a n g e

Braunschweig, Germany,

Technische Hochschule,

Physikalisches Laboratorium.

Braunschweig, July 27th, 1933.

Sir!

From the papers of the "Indian Journal of Physics" I see, that in your laboratories has been worked about the pianoforte. Here at the Physical Laboratory, Technische Hochschule, Braunschweig, Germany, we have also begun such investigations principally with measurements on the ready made pianoforte. As frequently, particularly lately in your laboratories, the most important interesting questions of the physics of the pianoforte were investigated by means of models, these were to be proofed on the ready made pianoforte. Here are given the lengths of the strings, the tensions of the strings, the sound-board, the hammer-heads and the velocities of the hammers. We intended to measure how here the details were constituted, how they alter, if one of them is altered, and how one influences the other. Further different questions of known experimental results showing deviations were to be examined.

I have now finished the experimental investigations. Soon this will be published in a German scientific paper. In agreement with Professor Dr. Diesselhorst, Director of the Physical Laboratory, I might propose you the printing of an extract of this work also in the "Indian Journal of Physics", since it would be of interest for the Indian physicists having worked in this direction.

Shortly I will give a summary of the investigations we have made. At first a device was made which allowed to pick up the vibration of each desired point of the original pianoforte-string without any distortion by an electrical method, and to take photographs with the aid of the Duddell-Oscillograph. Several differently constructed apparatus for picking up allowed to separate the components of the vibration and to investigate its origin. There were found various effects of coupled vibrations not considered in the theories presently known. The course of these vibrations was examined by this device and particularly the arising variations were stated, when the tensions of the strings, the velocity of the hammer-heads, the elasticity and the mass of the hammer-heads was variied. Particularly the conditions of the vibrations at the beginning were observed. At the same time with the vibrations of both components the motion of the hammer as a function of time was photographed also by an electrical method and the moment of rebound could be shown. Finally the velocity of the propagation of the wave along the string was measured immediately in dependence of the string By use of two such apparatus' at the same time. In many cases the sound of the pianoforte could be seen on the same photograph.

An apparatus analysing the frequences completely automatically was constructed to determine the distribution of energy of each of the both components of vibration and of the sound on the different partials, reconsidering the different variations noted above. By means of this apparatus numerous photographs were taken, so that the portion of energy of each partial could be produced for the noted variation, both for the components

and the sound. Further the dampings of the different partials were determined in order to proof the qualities of radiating of the sound-board.

Finally all these variations were made in the same manner in a room of a long Sabine-time to determine the middle of the density of energy produced by the pianoforte in the room.

Will you please write me, if you want to print an extract of this work and how many pages were required.

Yours sincerely

Werner Lange.

SIR C. V. RAMAN, Kt., M.A., Ph.D., D.Sc., LL.D., F.R.S., N.L.

INDIAN INSTITUTE OF SCIENCE.
BANGALORE.

10th October 1934.

My dear Professor Krishnan,

I am sorry to have to trouble you on the following matters:-

(1) You will remember my telescope was left behind in your room. It will be very helpful if you can get Ashu Babu to pack it up and return it to me by railway parcel.

(2) Two large and beautifully coloured Calffornian abalone shells belonging to me personally were left behind at the Association. I believe Ashu Babu knows them very well. They show gorgeous colours which I am now investigating, and I should be very pleased if you can find them and send them back to me. There is also a small card-board box containing samples of other small shells loaned to me by the Zoological Survey. I should also like to have these if possible. But, they are not so important as the abalone shells.

(3) When I came to Calcutta in July, I brought with me a German book with a yellow cover called, "Physikalische Methoden der Analytsche Chemie". I do not find it here and the chances are that I might have left it in your house or at the Association. The book is about the same size and the same colour as Bonhoeffer's ~~Phototen~~ "Photo Chemie". If you can find it and send the same to me, I shall be greatly obliged.

Yours affectionately,

C V Raman

Professor K.S.Krishnan, D.Sc.,
210, Bowbazar Street,
CALCUTTA.

SIR C. V. RAMAN, Kt., M.A., PH.D., D.Sc., LL.D., F.R.S., N.L.

INDIAN INSTITUTE OF SCIENCE,
BANGALORE.

Urgent

21st January 1935.

My dear Krishnan,

I remember vaguely you were telling me that some time back you tried to get the substance "Para di-phenylene" from certain organic chemists, but without success. Could you kindly send me the letters which you received from these chemists explaining the position? I should like also to know their names and the references to the literature about the attempts to synthesise Para di-phenylene. What was the result of your efforts to get the substance from the Organic Chemistry department of the Institute?

Yours affectionately,

C V Raman

Professor K.S.Krishnan, D.Sc.,
Indian Association for the Cultivation of Science,
210, Bowbazar Street,
CALCUTTA.

SIR C. V. RAMAN, Kt., M.A., Ph.D., D.Sc., LL.D., F.R.S., N.L.

INDIAN INSTITUTE OF SCIENCE,
BANGALORE.

26th February 1935.

My dear Professor Krishnan,

The twelve copies of Bulletin No.15 duly came to hand. I shall be sending a cheque for the same officially to-day. I am anxious that Prof.Harker should get a copy of my paper on "Experiments with mechanically-played violins" which appeared in the Vol.VI of the Proceedings of the Association and not in the Bulletin of the Association. Kindly send him a copy of this particular number which I am sure will interest him very much, and also of such of the old numbers of the Proceedings VI to VII ~~which~~ as contain acoustical papers.

I think you can now go ahead with writing Part IV of the Phil.Trans paper. Kindly return my copy of Stoner's book if you have done with it.

With kind regards,

Yours affectionately,

C V Raman

Prof.K.S.Krishnan, D.Sc.,
Indian Association for the Cultivation of Science,
210, Bowbazar Street,
CALCUTTA.

SIR C. V. RAMAN, Kt., M.A., PH.D., D.Sc., LL.D., F.R.S., N.L.

INDIAN INSTITUTE OF SCIENCE,
BANGALORE.

28th January 1935.

My dear Krishnan,

I have just received your two letters and the manuscripts of the two papers.

I have carefully looked through Mr.Bose's paper on the Weiss Constant. I notice the following points which are likely to attract the notice of the referees:- The general result, namely that the Weiss Constant is zero has already been published in "Nature; The result itself is what should be expected from theoretical considerations and from the known experimental results with the respective solids; The experimental method used is well-known, and so far as I can see, no novelty is claimed for it.

Mr.Bose has evidently carried out a very careful and useful piece of research. My feeling is however that the referees of the Royal Society are not likely to be enthusiastic about the paper and might consider it unduly lengthy in relation to its importance. Kindly let me know what you would advise me to do in the circumstances. My feeling is that the Royal Society may refuse or delay publication, and meanwhile, some one else might publish the results elsewhere and thus deprive Mr.Bose of all credit for his work. I would suggest, if you are agreeable, that the paper be published immediately in its present form in the Proceedings of the Indian Academy of Sciences. If, however, you think publication in the Royal Society is desirable, I would suggest that the paper

be shortened by retaining only one or two of the tables as samples and summarising the rest in a graph. This would reduce the length of the paper by about half without depriving it of any of its value and make its acceptance by the Royal Society more likely.

I am retaining the manuscript pending your reply. Seshan's paper has been sent in to the Academy for publication.

Yours affectionately,

C V Raman

Professor K.S.Krishnan, D.Sc.,
Indian Association for the Cultivation of Science,
210, Bowbazar Street,
CALCUTTA.

SIR C. V. RAMAN, Kt., M.A., PH.D., D.Sc., LL.D., F.R.S., N.L.

INDIAN INSTITUTE OF SCIENCE,
BANGALORE.

8th August 1935.

My dear Prof.Krishnan,

Could you kindly let me know the address of the firm in Manchester who made the Rutherford Electro-Magnet? I believe it is Cooke.

What about Part IV of your Memoir? I am anxiously awaiting it to send it on to the Royal Society.

Yours affectionately,

C V Raman

Professor K.S.Krishnan, D.Sc.,
Indian Association for the Cultivation of Science,
210, Bowbazar Street,
CALCUTTA.

SIR C. V. RAMAN, KT., M.A., PH.D., D.Sc., LL.D., F.R.S., N.L.

INDIAN INSTITUTE OF SCIENCE,
BANGALORE.

25th November 1935.

My dear Professor Krishnan,

Kindly let me know Professor Sir ~~Louis~~ Lewis Fermor's Calcutta address immediately. Kindly also send such of your publications as you can spare to him.

Yours affectionately,

C V Raman

Professor K.S.Krishnan, D.Sc.,
Indian Association for the Cultivation of Science,
210, Bowbazar Street,
CALCUTTA.

SIR C. V. RAMAN, KT., M.A., PH.D., D.Sc., LL.D., F.R.S., N.L.

INDIAN INSTITUTE OF SCIENCE,
BANGALORE.

19th January 1936.

My dear Prof.Krishnan,

I have heard from the Secretary of the Royal Society that the certificate has been duly received and is in order. The signatories are, Prof.O.W.Richardson, Prof.Donnan, Prof.Morris W. Travers, Prof.J.L.Simonsen, Prof.Stanley Allen, Sir M.O.Forster and Sir Louis Fermor. I have written to Sir Gilbert Walker and Dr.A.H.Tutton who agreed to support your candidature to inform the Secretaries, Royal Society.

It is now up to you to support your candidature by discreet propaganda and also by fresh scientific efforts. I would suggest that you send me immediately a complete set of your publications which I shall forward to the Secretary for consideration by the Committee. You might also send some of your more recent papers to the Members of the Physics Committee and of the Council of the Royal Society, if you can spare the copies. It is of course unlikely that you would be elected this year, but if you can break some new ground and keep your name well to the front by some letters in Nature etc., you may have a chance early in next year's election.

By the way, I am urgently in need of a sphere of clear quartz. I think you have one at the Association, and if you can kindly send it to me by registered insured post carefully packed,

I

I will return it after some time.

With kind regards,

Yours sincerely,

C V Raman

Professor K.S.Krishnan, D.Sc.,

Indian Association for the Cultivation of Science,

210, Bowbazar Street,

CALCUTTA.

Registered

THE ROYAL SOCIETY,
BURLINGTON HOUSE,
LONDON, W.1.

REGENT ~~5865~~ 1736

1st May, 1936.

My dear Krishnan,
Was not the first
copy of the proof
received by you?
Kindly send them
on and by Air Mail
+ also the proof by
registered ordinary mail
if not

Dear Sir,

I enclose a second copy of the proof of your paper which, together with the original, was sent to you on the 19th November, 1935. This appears to have gone astray as we have not had the corrected proof returned. I am sending this by Air Mail and I should like to have an acknowledgment of its safe receipt.

Yours faithfully,

Sent by Rgd Post
Receipt No 380 dated
12/12/35

W. E. S. Diamond

for R. WINCKWORTH,
Assistant Secretary.

Dr. K. S. Krishnan,
C/o Sir Venkata Raman, F.R.S.,
Indian Institute of Science,
Hebbal,
Bangalore,
S. India.

SIR C. V. RAMAN, Kt., M.A., Ph.D., D.Sc., LL.D., F.R.S., N.L.

INDIAN INSTITUTE OF SCIENCE,
BANGALORE.

13th May 1936.

My dear Krishnan,

Two days ago, I received from the Royal Society the duplicate proof of your Phil. Trans. Part II They write to me that they sent it to you four months' ago and that you never returned the proofs. The duplicate proofs were sent to you yesterday by registered post. Kindly write to the Royal Society by air mail acknowledging receipt of the proofs and return the corrected proofs to them by ordinary registered mail. I am sorry that the publication of the paper was delayed by several months on account of this accident. Kindly let me know how it happened.

What about Part V of your memoir? I shall be glad to know how you are getting on.

Yours sincerely,

C V Raman

Professor K.S.Krishnan, D.Sc.,
Indian Association for the Cultivation of Science,
210, Bowbazar Street,
CALCUTTA.

REGENT ~~6655~~. 1736

THE ROYAL SOCIETY,
BURLINGTON HOUSE,
LONDON, W.1.

27th May, 1936.

Dear Sir,

Thank you for your letter of 18th May, together with the copy of the proof of your paper on "Investigations on Magne-Crystallic Action. Part IV", which has been safely received.

Some time after the despatch of this second proof to you I found that the original proof had been safely received but it had, unfortunately, been lost. I apologise for the inconvenience this has caused you and am hastening your paper through the press as quickly as possible, so that the untimate date of publication will not be much later than that on which the paper would have appeared had the proof not been lost.

The 200 copies of reprints of the paper will be despatched to you in due course.

Yours faithfully,

W. Eastland

for R. Winckworth,
Assistant Secretary.

Professor K.S.Krishnan,
Indian Association for the Cultivation of Science,
Calcutta.

SIR C. V. RAMAN, Kt., M.A., PH.D., D.Sc., LL.D., F.R.S., N.L.

INDIAN INSTITUTE OF SCIENCE,
BANGALORE.

14th November 1936.

My dear Krishnan,

I was very pleased indeed to learn from your letter about invitation to Cambridge.

I was glad also to notice in the Proceedings of the Royal Institution Sir William Bragg's lecture about your work. I presume you have also seen Pauling's recent paper attempting to explain your results on the magnetic anisotropy of aromatic molecules. All this is very satisfactory. I hope you are pushing on with your Part V. I should like to see it sent off to England as soon as possible.

Regarding your tour in Europe, much depends upon the time and money at your disposal and also upon your inclinations. From the point of view of your work, it may be desirable for you to visit Paris to see Prof. Cotton's great electro-magnet and also to go to Strassbourg where Professor ~~West~~ Weiss has a great many workers in magnetism. I am sure you will be kindly received in both the places. I think you should not miss seeing something of Switzerland and of the Italian lakes. If you will travel by the Italian boat, you would probably be more comfortable regarding your food, and you could also see Switzerland and Italy en route and save the rest of the time for visiting the scientific laboratories. To plan your tour, it is best you get from Thomas Cook & Co. a copy of the latest continental railway time table and also the Oriental Traveller's Gazette. As there is likely to be a great rush for accommodation, you must book

your steamer passages to and fro at once if you have not already done so. Kindly let me know about your plans in more detail.

Yours affectionately,

C V Raman

K.S.Krishnan Esq., D.Sc.,
210, Bowbazaar Street,
Calcutta.

SIR C. V. RAMAN, KT., M.A., PH.D., D.Sc., LL.D., F.R.S., N.L.

INDIAN INSTITUTE OF SCIENCE,
BANGALORE.

Personal & Confidential

23rd July 1937.

My dear Krishnan,

I was glad to see in the papers that you have come back from your European tour. I hope you thoroughly enjoyed it.

What about Part V of your ~~Filtrons~~ Phil. Trans. Memoir? Has it been communicated to the Society? If not, kindly send it to me as soon as possible so that it may come out in time to influence ~~the~~ next year's elections to the Society.

I have been through a pretty bad time here, but I hope my troubles are now at an end. I have given up the Directorship and agreed to be a Professor of Physics on Rs.2500/- per mensem for ten years. The fifteen per cent cut in salary is not unreasonable, seeing that simultaneously my work has been cut by fifty per cent and my worries by one hundred per cent. I feel greatly relieved at the prospect of being able to devote my whole attention to science, and I am pretty confident that the results will soon be evident in my output of research.

You must make a great effort in your work so as to get the F.R.S., within a year or two at the latest.

Yours affectionately,

C V Raman

Professor K.S.Krishnan, D.Sc.,
Indian Association for the Cultivation of Science,
210, Bowbazar Street,
Calcutta.

P.S.- Kindly look up the register of students at the Association

P. T. O

in 1927 and 1928 to find out if there ~~is~~ was a man called S.Ramachandran working at that time, and if so, what was the problem on which he was engaged. I have no recollection of him. He has written to me asking for some financial assistance, but I wish to verify the bona fides of his statement before considering the request.

C.V. Raman

PENINSULAR & ORIENTAL STEAM NAVIGATION COMPANY

TURBO-ELECTRIC SHIP.
"VICEROY OF INDIA"

LETTER CARD

TO Professor K. S. Krishnan
D.Sc
210 Bowbazar Street
Calcutta
INDIA

FROM SS. Viceroy of India

P. & O. TURBO-ELECTRIC SHIP "VICEROY OF INDIA," 20,000 TONS

WATERLOW & SONS LIMITED. LONDON. ENGLAND.

PORTION OF FIRST CLASS DINING SALOON

CORRESPONDENCE

15/5/37

Aden

My dear Krishnan.

I shall be reaching Marseilles on the 24th and Paris the same day or the next.

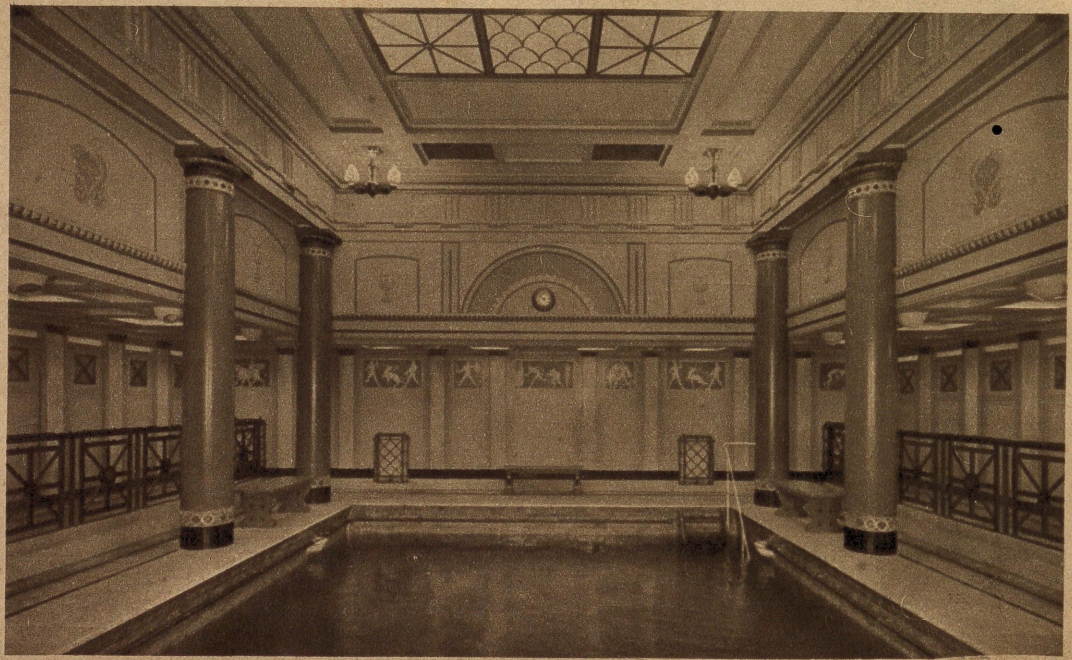
I think it would be a pity to delay the reports on the Mysore theses of Jogarao and of Pattabhiramiah till my return. Could you not

FIRST SALOON MUSIC ROOM

Kindly make out the two reports and send them to me c/o Thos. Cook & Son, Place de la Madelaine, Paris. Then I can look through them, sign ~~it~~ them and return to you for transmission to the Registrar of the Andhra University. I shall sail by S.S. for India for Marseilles about the beginning

A CORNER OF THE FIRST SALOON SMOKING ROOM

of November. If you could [send]
me the reports by air mail to
Paris, this would save at least
a month in sending in the
reports. I have not yet
decided where I shall go after
seeing Paris & attending the
Congress. But in any case I shall
get Thos Cook to send on my letters
yours affly — C V Raman



THE POMPEIAN SWIMMING BATH

- CONGRES DU PALAIS DE LA DECOUVERTE -

du 30 Septembre au 9 Octobre 1937

Division: CHIMIE GÉNÉRALE.

Rapport de: F. LONDON , Paris .

- RÉSUMÉ -

- SUPRACONDUCTIBILITÉ DANS LES COMBINAISONS AROMATIQUES -

Le Vendredi 8 Octobre à 16 heures , Institut de Chimie
11, rue Pierre Curie

---:---

On a trouvé expérimentalement que les combinaisons aromatiques montrent une susceptibilité diamagnétique beaucoup plus grande en direction permendiculaire au plan des anneaux aromatiques qu'en ce plan même. On a déjà essayé de décrire, d'une façon empirique, ce comportement à l'aide de l'hypothèse que dans ces substances les courants diamagnétiques ne sont pas enfermés comme d'ordinaire, à l'intérieur des atomes individuels, mais qu'ils circulent d'un atome à l'autre autour des anneaux aromatiques, ce qui revient à dire que les anneaux aromatiques se comportent comme des supraconducteurs. Nous donnons un fondement à cette hypothèse à la base de la mécanique ondulatoire. Nous montrons pourquoi ce mécanisme particulier de transport d'électricité est borné essentiellement aux combinaisons aromatiques et pourquoi courants interatomiques ne peuvent pas se manifester ni à l'intérieur des combinaisons saturées, même cycliques, comme le cyclo benzène C_6H_{12}, ni, sous la forme de courants intermoléculaires entre des arrangements saturées.

To Prof. K. S. Krishnan
for information
F. London

We shall expect you at
the Hotel de Paris, Boulevarde
de la Madeleine 7-8 today.

Yours [illegible]

B [illegible]

Sir C.V. Raman

"CRYSTALS AND PHOTONS"

CONTENTS.

SIR C. V. RAMAN, KT., M.A., PH.D., D.SC., LL.D., F.R.S., N.L.

INDIAN INSTITUTE OF SCIENCE,
BANGALORE.

Registered

28.1.38

My dear Krishnan,

In your present position, you have the following advantages

1) A perfectly secure income
2) A fair salary
3) Freedom to do what work you please or not to work at all, with all your time at your disposal
4) The advantage of living in a place where this is some sort of intellectual activity
5) A tolerable climate and healthy city

The disadvantages probably are a) pinpricks b) insufficient money for apparatus and materials. I doubt very much whether you will be able to retain (1) (2) (3) and (4) as well as (5) in any other position in India and at the same time get rid of (a) and (b). The burden of routine teaching and the handling of hundreds of indifferent students is unavoidable in any University. I doubt if you will get enough research students and enough money anywhere except at the Institute here. The provincial governments in U.P certainly won't

SIR C. V. RAMAN, KT., M.A., PH.D., D.Sc., LL.D., F.R.S., N.L.

INDIAN INSTITUTE OF SCIENCE,
BANGALORE.

have money to lavish on the Allahabad University, and I should not be surprised if before long salaries are reduced even down to the 750 Rs level which you are already enjoying ~~on~~ and will continue to enjoy for life. Pinpricks there always will be so long as you have to do with ignorant or jealous colleagues or superiors. The dangers I ~~foste~~ foresee in Indian Universities are 1) Cut in salaries 2) increased burden of teaching (3) reduction of money available for research, and (4) Compulsion to undertake "industrial research". You may thus be going from the frying pan to the fire, if you leave the Association.

My feeling therefore is that you should stick to your present position

SIR C. V. RAMAN, KT., M.A., PH.D., D.Sc., LL.D., F.R.S., N.L.

INDIAN INSTITUTE OF SCIENCE,
BANGALORE.

as unless you are finding it absolutely intolerable. If any other position is offering itself, I would advise you to be most critical and insist on making sure of any offered advantages by having them put on a contractual basis. My own impression is that if you work up and get your F.R.S. ~~I shall be~~ ~~I am going to Delhi~~ you will be able to tap money from private sources for your research work before long.

I shall be in Calcutta on the morning of the 10th Feb. on my way to Delhi when we shall be able to meet and discuss the matter further.

Yours affly
C V Raman

SIR C. V. RAMAN, KT., M.A., PH.D., D.Sc., LL.D., F.R.S., N.L.

INDIAN INSTITUTE OF SCIENCE,
BANGALORE.

C/o Imperial Bank of India
25 Old Broad Street
London E. C. 2

Confidential

12. 5. 38

My dear Krishnan,

Since writing to you yesterday, I received the Mss of Part VI and have read through it carefully. I confess I do not feel very happy about submitting this Paper to the Royal Society for the Phil. Trans. for various reasons, ~~Kindly consider~~ and prefer to write to you to state how I feel about the matter.

(a) The referees of the Society have so far been very kind about publishing the first five parts, and I am very anxious for your sake that nothing should be done which is likely to alter the attitude of the Society about the continuance of the publication of this work from your laboratory. The (practical) rejection of the paper on Copper

SIR C. V. RAMAN, KT., M.A., PH.D., D.Sc., LL.D., F.R.S., N.L.
INDIAN INSTITUTE OF SCIENCE,
BANGALORE.

sulphate makes me all the more anxious about this matter.

(b) The present paper is no doubt a valuable piece of work as it contains data and discussion of 35 organic crystals. The summary however suggests that beyond the application of ~~all~~ already well-established methods and principles to these cases, nothing essentially new either in respect of technique or in respect of theory has emerged from the work. This taken together with the fact that the paper is put forward as the composition of ~~one~~ one of your students is likely to make the referees think that this would be a suitable opportunity to break the already long series of memoirs in the Phil. Trans. from an Indian laboratory.

(c) Though there is a reference made to the theoretical work of Pauling, London and Frenkel et al, no attempt has been made to consider how far the ~~latest work on organic Crystals~~ present work confirms or modifies the theoretical outlook.

SIR C. V. RAMAN, KT., M.A., PH.D., D.Sc., LL.D., F.R.S., N.L.

INDIAN INSTITUTE OF SCIENCE,
BANGALORE.

(d) Prima facie, judging from the text and tone of the paper, I have a feeling that your personal share in its composition and especially in the discussion of the results is in no way less than in any earlier paper of the series. The reason put forward for omitting your name from the authorship does not appeal to me. Mr. Banerjee is already the joint author of several papers on the subject, and if he writes up a proper thesis (in the French ~~style~~ style) reviewing the present position of the subject (expt + theory) and including ~~those~~ the some of the latest unpublished results, he should get his D.Sc easily. My feeling ~~this~~ is that this should in no way interfere with the publication, in the same way, as earlier papers of the more significant work done under your

SIR C. V. RAMAN, KT., M.A., PH.D., D.Sc., LL.D., F.R.S., N.L.

INDIAN INSTITUTE OF SCIENCE,
BANGALORE.

~~D~~ direction and guidance, with your name on it

Kindly consider the above and let me know your views. My suggestions are

1) That ~~the part~~ this Part VI is sent in amended as under the joint ~~two~~ names of yourself and Banerji as usual, with a slightly amplified ~~&~~ summary and perhaps an extended discussion of the theory in its general aspects.

2) Alternatively, Part VII, which as you say is already ready, ~~be~~ sent in first as Part VI, and Part VI ~~after~~ be published ~~thereafter~~ as Part VII ~~with~~ ~~when~~ ~~to~~ with your joint names, after Mr Banerji's thesis has been approved by the D.Sc. examiners. (This may not take more than a few months!). I strongly prefer alternative (1)

Yours sincerely
C V Raman

P.S I am retaining the MSS till I hear from you

SIR C. V. RAMAN, KT., M.A., PH.D., D.Sc., LL.D., F.R.S., N.L.

INDIAN INSTITUTE OF SCIENCE,
BANGALORE.

10th August 1938.

My dear Krishnan,

I have received your kind letter of the 5th August and its enclosures. The diagram of the cryostat is not satisfactory. I am therefore arranging to have both the diagram and the graph redrawn by the Artist here as quickly as possible. As soon as they are ready, the paper will be sent to the Royal Society with my recommendation for publication in the Phil. Trans.

Regarding the Copper Sulphate paper, I do not think any further action is now necessary.

I shall be glad to hear from you whether Mr.Banerjee's D.Sc. thesis has been approved by the examiners of the Dacca University. Though it is undoubtedly a good piece of work, I do not feel that it has a strong claim to publication as a Phil. Trans. memoir and would suggest that if you and Mr.Banerjee are agreeable, that it be published immediately in the Proceedings of the Indian Academy of Sciences. It would certainly be better to do this than to take the risk of its refusal by the Royal Society with its consequent repercussions. Kindly let me know your decision.

With kind regards,

Yours sincerely,

C V Raman

Prof.K.S.Krishnan, D.Sc.

SIR C. V. RAMAN, KT., M.A., PH.D., D.Sc., LL.D., F.R.S., N.L.

INDIAN INSTITUTE OF SCIENCE,
BANGALORE.

18th August 1938.

My dear Krishnan.

I have just received your kind letter of the 15th August. Both the figures have been redrawn by our artist and in the figure of the cryostat I have made the correction as requested by you.

When I told Nilakantan about your new formula for the torsion method, he went into it carefully and ~~finds~~ found some difficulty in deriving it. I understand he wrote to you about it a few days ago. It will avoid possible trouble with the referees of the Phil.Trans. paper if you will kindly look into the matter and let me know whether the formula or its derivation needs explanation or amendment in the manuscript of the paper. ~~Kindly treat this enquiry as very urgent as I do not wish to hold up the paper unnecessarily.~~ I am however sending off the MS. to the Royal Soc. of today

I shall always be willing to communicate to the Royal Society any meritorious paper emerging from your laboratory, especially if your name appears on it as author or joint author as a guarantee of quality. I feel, however, that it would not be an act of wisdom to offer Mr.Banerji's paper for the Philosophical Transactions; it is, I think, most likely that the referees would suggest that a paper of this type would be more appropriately curtailed in length and published in the ordinary scientific periodicals. I am, therefore, returning the manuscript for publication in the Zeitschrift fur Krystallographie as suggested by you.

Yours sincerely,

C V Raman

Prof.K.S.Krishnan, D.Sc.

SIR C. V. RAMAN, Kt., M.A., PH.D., D.Sc., LL.D., F.R.S., N.L.

INDIAN INSTITUTE OF SCIENCE,
BANGALORE.
27th March 1939.

My dear Krishnan,

I was very glad to learn from the papers about the invitation you have received for the Strasbuurh & Danzig meetings.

From the enclosures of your letter of the 22nd instant, I see that you will be paid for your expenses only for the journeys within Europe. The steamer fare to and from Europe is evidently to be met by yourself. This of course is a substantial expense but considering the opportunities of scientific discussion, it is certainly be worth your while to spend this money.

I hope that war will not break out while you are in Europe. If it does, you will have to be very quick in getting out of Germany.

Yours affectionately,

C V Raman

Prof. K.S.Krishnan D.Sc.,
Mahendralal Sircar of Physics,
210, Bowbazaar Street,
CALCUTTA.

SIR C. V. RAMAN. Kt., M.A., Ph.D., D.Sc., LL.D., F.R.S., N.L.

INDIAN INSTITUTE OF SCIENCE,
BANGALORE.

31st July 1939.

My dear Krishnan,

Many thanks for the photograph of Prof. Henri and myself.

I am very glad to hear of the success of your recent tour.

I hope you are getting on well with your work.

Yours affectionately,

C V Raman

Prof. K.S.Krishnan,
210, Bowbazar Street,
Calcutta.

SIR C. V. RAMAN, Kt., M.A., PH.D., D.Sc., LL.D., F.R.S., N.L.

INDIAN INSTITUTE OF SCIENCE,
BANGALORE.

2nd September 1939.

My dear Krishnan,

Many thanks for your letter of the 29th August and its enclosure. I have signed the latter and sent it on to the Registrar, Andhra University.

Yours ~~sincerely,~~ affectionately

C V Raman

Prof. K.S.Krishnan, D.Sc.,
Indian Association for the Cultivation of Science,
210, Bowbazar Street,
Calcutta.