



Prof. Hevesy and Mrs. Hevesy, when they visited Japan in 1931.  
 — Together with the scientists of the I.P.C.R. —

Back row: Sugiura, Sahashi, Kubota, Shibata, Nishi, Setoh, Kotake,  
 Shiba, Tuzi, Souda, Uno

Second row: Kimura, Yamaguchi, Samejima, Fukuda, Ishida, Nishikawa,  
 Kinoshita, Iimori, Masima, Isobe, Nishina

Front row: Katayama, Matsubara, Mrs. Takamine, Mrs. Katayama, Hevesy,  
 Okochi, Mrs. Hevesy, Mrs. Nishina, Nagaoka, Suzuki, Wada



Freiburg i. Br., den 18 Nov. 1928

Institut für Physikalische Chemie  
der Universität

My dear Dr. Nishina,

It was not without sorrow that my wife and myself read your farewell letter. It is so sad to realise that we will possibly never see you again. We always hoped that you will visit us before leaving Europe, but fully realise that you must have been very busy before your departure and Freiburg was out of your way.

I am writing this letter to Tokio as I am not sure if it would arrive in time to San Francisco. I received your letter already a fortnight ago but I had a busy time since. The reason is that I was offered the chair of phys. chem. in the Univ. of Frankfurt and I had to negotiate a deal with the authorities in Frankfurt, in Berlin and in Karlsruhe (the Baden state capital, to which Freiburg sorts). It is a very hard decision, a decision for life, to stay or to move. Both towns are very sympathetic, both Universities very good ones. The condition of my staying in Freiburg would be an improved laboratory, as my institute is, as you experienced it, a rather modest one. We shall see! For your future life in Japan all our best wishes. You will have a difficult time at the beginning after your long stay in Europe. But I don't doubt that you will feel ultimately very well and acquire a high esteem of your colleagues, an esteem which you deserve in the highest degree.

If you meet Kimura kindly remember us to him, just so to Mr. and Mrs. Takamine.

With many kind regards from both of us and all our best wishes to your future, still hoping that a revoir will be possible once, I remain

Yours very sincerely

G. Hevesy.

Freiburg i. Br. 24 April 1929  
Hebelstr. 38

Institut für Physik. Chemie.  
der Univ.

Dear Dr. Nishina,

Yesterday I had the visit of Messrs. Inoue and Matsuno and I was told by them that you got married. I rushed home to tell these exciting news my wife. Ladies are most interested in such topics and by considering the great interest which my wife, just as myself, are hoping in your welfare, you will certainly understand how pleased my wife was about these pleasant news. We congratulate you both very heartily and wish you much happiness in your married life. This morning your very kind and interesting letter of the first of April reached me. I was extremely pleased to hear from you. You must have had and certainly still have a very busy time. Eight years is an appreciable part of one's lifetime and you must have felt rather strange the first moment after your arrival to Tokio. But adapting power is one of the most prominent faculty of able human being and you felt certainly soon as if you would not have been away at all. Married life means also a great change in one's life. You have to adapt your ways and moods to family requirements. However it makes one more settled and brings one nearer to other human beings. You understand easier their wants, wishes, pleasures and sorrows. It must have been a hard task to lecture on current problems in physics and especially to write down these. We have been extremely pleased to hear that Mr. Kimura is feeling well. Pray remember us very kindly to him and also to Takamine, Sugiura.

After a long deliberation I decided to remain in Freiburg, where life is quieter and where it is easier to bring up one's children bodily and morally as well. In some respects I am very sorry that I came to this conclusion as I could have built a magnificent laboratory in Frankfurt at once, while my laboratory here shall only be extended in a small scale. The post in Frankfurt was offered now to Otto Stern. He was here yesterday and was very pleased to hear from me the very favorable conditions offered to me, which will certainly also be offered to him. I would be very pleased if Otto Stern, whom many of us consider to be the most able physical chemist of our generation would accept this post. I had quite a lot of work with the planning of the Frankfurt laboratory and connected topics. We have now four spectrographs of

Siegbahn type filled up, besides three arrangements to take Debye-Scherrer diagrams. We are thus quite well equipped for X-ray work.

It is only few days ago that we returned from Meran in Tirol where we met my mother. In about two months we are leaving for Capetown where the B.A. meets this year. We are looking forwards to our journey very much. In 1930/31 we plan a journey to U.S., to Ithaca and once I hope, we can embark for Japan. But I hope you will come at an earlier date to Europe.

While in Meran I got a telegram from Prof. Bohr inviting me to come for a week to Copenhagen where several former collaborators of him met. Unfortunately I could not leave Meran then. My children are keeping very well and just so does my wife.

With all my best wishes to you and Mrs. N. and heartiest greetings.

I remain yours ever

G. Hevesy

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15 VIII 1929

Dear Mr. Nishina,

We are staying here with my wife at the Victoria Falls. We had a most interesting time since we left Freiburg in June and will be back there in October. Hope you are keeping very fit. With heartiest greetings.

Your G. Hevesy

1929 25 Nov.

My dear Mr. Nishina

We have been very much pleased to see your familiar writing on a postcard sent by you, Mr. K. and Mr. T. On this postcard you can see, in the background, on the top of the hill Schloss Welsbach. Auer died unfortunately this summer. A very great loss! When are you coming to Europe?. We would like very much to see you and Mrs. Nishina. With many kind regards from both of us,

yours very sincerely  
G. Hevesy

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Institut für Physik. Chemie  
der Univ.

Freiburg i. Br. 9th Jan. 1930  
Hebelstr. 38

Dear Dr. Nishina,

Your kind letter from 16 Dec. reached me after my return from Hungary where I spent the holidays together with my family. I want also thank you very heartily for your kind postcard and the good wishes for 1930 which we very cordially reciprocate.

I am sorry to hear that you have to bear the burden of a lot of uninteresting work. It is very trying and I hope that you will soon be able to concentrate your forces solely on research. I am very anxious to come to Japan on my way back from U.S.A. I would like very much to see my numerous friends there again and also the country. It will be a great pleasure for me to give few lectures. I find it very kind to offer me an amount of about 3000 Yen. It will certainly facilitate the management of the financial side of my journey. I intend to take my wife with me. She is very anxious to see you all again, like in the old Copenhagen days. We will spend the winter in Ithaca and leave there the end of January. I don't intend to visit many American Universities, but would like to visit Pasadena, if feasible. From the west coast we would sail to Japan and arrive there the end of February. We could leave the middle of March and sail home before it is getting too hot. Of course April and May would be certainly better for Japan but I would

like to be back for our summer term. We have already to leave here in September!

We are working fairly hard but we make only slow progress. We have 4 spectrographs running, 2 with primary and 2 with secondary tubes. Some work is going on on the radioactivity of potassium using the new Geiger counter.

I have no news from Copenhagen. With many kind regards and wishes from both of us. yours sincerely

G. Hevesy

Institut für Physik. Chemie  
der Univ.

Freiburg i. Br. 24 Mai 1931  
Hebelstr. 38

Dear Dr. Nishina,

We have been delighted to get your kind letter of 24. 4. Having all those countless delightful recollections from our trip in Japan we have entirely forgotten that trifle of unpleasantness which we experienced through the loss of my wife's watch. However we are very much obliged to you for all the trouble you took in that matter. We are sure that everything possible was done and we can close that chapter with a good conscience.

The new lab. building is now finished so far as the exterior is concerned, but the electrical installation makes slow progress. However with some patience that will also be finished and our lab. conditions will be next winter already very much improved. Dr. Ishibashi is in Vienna at the Congress of the Bunsen Society. He finds that the Ti/Ba ratio very markedly increases with decreasing concentration. Some of the Ba must vanish when the absolute concentration is very low 0.1 % or less. At the low concentration and at very long exposure the cathode ray effects are very marked. Fässler got some nice results which he will publish in detail. This moment he tries to determine if it is more favorable to use K-rays when analysing Zirconium by the secondary method or not. The answer seems to be an affirmative one. We have not determined yet the secondary Ti/Ba intensity ratio accurately as Dr. Alexander was occupied in determining exactly the  $\text{Sn } L\alpha_1/\text{Sb } L\alpha_1$

intensity ratio which very markedly deviates from 1. However that will be soon done and we shall see if the intensity ratios in Tokyo and Freiburg are equal or not! We are expecting Dr. Gamow's visit who will stay with us for few days. I am furthermore writing c/o the Brüssel Embassy to invite Prof. Nagaoka to visit us. We are often speaking from our experiences in Japan, the sacred bridge in Nikko and the hot beds in Hakone and so on. It was like a dream.

Pray remember us to all our friends in Tokyo and especially to Mrs. Nishina.

Many kind regards from both of us.

Yours very sincerely  
G. Hevesy

Institut für Physik. Chemie  
der Univ.

Freiburg i. Br. 27 July 1931  
Hebelstr. 38

My dear Dr. Nishina,

Your kind letters of 2.7 and 10.7 made me great pleasure. I have not heard from Prof. Takamine nor Prof. Nagaoka but I was told that the latter was in Berlin. I am enclosing Geiger's letter, pray keep or destroy the latter as I don't need it.

My wife and the children are in Hornbaek, I intend to leave next week for Hungary. Mr. Faessler is writing up his paper, he extended his studies to chlorine compounds as well. Dr. Ishibashi made a very extended study of the primary Ti/Ba ratio and gets (Ratio of J) 1.18 when he investigates preparations containing about 1 % Ti or more, but much larger ratios in very dilute preparations. The ratio increases furthermore with the increase of time, what indicates a departure of barium.

We had an unpleasant time recently. All University expenditures were badly curtailed and especially the salary of the assistants. The latter was very low before the war, was increased to the 2-3 fold after the war and our assistants have unfortunately a very bad time now. The whole affair worries me very much. My new lab. made good progress in



spite of all these difficulties and I hope that we can open it in the fall.

I am engaged with collecting systematically all photos taken in Japan and I recollect simultaneously all my pleasant memories. Enclosed I am sending a photo showing yourself and my wife at Kamakura.

After a brief stay in Hungary I will return to Freiburg and proceed the last week in september to London to the B.A. meeting and the Faraday centenary.

How is Mrs. Nishina and how is the Baby?

Remember me very kindly to her.

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31 VII 1931

I just obtained Voss's letter, which I am sending you enclosed. As I have to leave tomorrow for Hungary I am very much in hurry.

With kindest regards

Yours sincerely  
G. Hevesy

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The Institute of Physical and  
Chemical Research  
Komagome, Hongo, Tokyo

Tokyo 24, 2. 1933

My dear Professor Hevesy,

I thank you very much indeed for all the separate copies of your papers, which you have sent to me now and then and which are very interesting to me.

Through your work I presume that you are very well. I must congratulate you on your discovery of Sm radioactivity. It is very

stimulating all people who are interested in nuclear problems in which we are also very much interested. We hope in near future to begin some work on the artificial desintegration as it seems to be rather an easy matter. In this connection we want some metallic boron and metallic beryllium and are going to write to Kahlbaum to send some to us. If you happen to know a better firm for these materials, we should be extremely thankful for your information.

How is your family? Are they all right? We are getting on all right, my wife and two boys. At present Japan is much occupied with the problem of Manchuria and the relation with League of Nations. Up to the present, however, this does not matter us very much and I hope it will not disturb our work in future.

Have you heard from Professor Bohr? I do not know whether he will come over here in near future.

I met some months ago Dr. Ishibashi who came back from Freiburg and heard different news from him but as both of us had very little time we could not talk much. I hope soon to have an opportunity to see him and have some more talk about Freiburg.

With kindest remembrances and best wishes to Mrs. Hevesy and yourself from my wife and

Yours Sincerely

Y.N.

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Institut für Physik. Chemie  
der Univ.

Freiburg i. Br. 1933 26 March  
Hebelstr. 38

My dear Dr. Nishina,

It was as usual a very great pleasure for us to obtain your very kind letter. Of course what interested us above all the news your letter contained was the wellbeing of your family. We were very pleased to hear that they are keeping so well. Our newspapers bring sometimes news about Japan, but the information given to the reader are so hazy that you can't make yourself any judgement about the political and economic situation.

I am reading with great interest that you will join the proud company of transmutators of the elements. Boron is very easy to obtain, beryllium is much more difficult to prepare. The best source of both elements is Kahlbaum. If I would know the quantity necessary for you I would instruct Kahlbaum at once to dispatch you the material, as matter stands I want to take the responsibility. In similar cases pray send me your instructions. I will be only glad to carry them out.

During our stay in Japan you mentioned me that you wish to get some scandium, I am not sure if I sent you the material. Pray let me know if that would not be the case or if you want to have more.

We were engaged lately in investigating the samarium radiation and we just started to look out for  $\gamma$ -rays though the hope is a very modest one, as the intensity of  $\alpha$ -rays is already not more than about 1/200 of that of uranium.

We worked on the effect of fluorescent screens on the intensity of X-rays and also on the fluorescent yield of X-ray radiation, a very fascinating problem and much more intricate as thought hitherto.

Recently great changes occurred in Germany, we turned into a Fascist state, a strong state, with all the advantages and disadvantages of that system. However as matter stood Germany had the only possibility to choose that sort of government, the communists would have otherwise swallowed us sooner or later.

We are missing Dr. Ishibashi very much, he is such a nice and kind man and I wish he would make a good career.

How is Mr. Kimura and how is Mr. Iimori. Pray remember me very kindly to them.

My family is keeping very well. My second daughter - our third child - is starting to walk. She is a very jolly little girl, full of life. My wife had a letter from Mrs. Bohr not long ago. They contemplate to visit Chicago this summer, but had not yet made their mind up, when they will start. My family intends to visit the Danish seashore in July and I will join them in August. I am looking forward very much to see all the Danish friends again; since we are living in Freiburg I have been once in Denmark for a flying visit. This time I intend to stay for 5 weeks. We had recently a visit from the young Bjernsen. He told us that 5 gardeners are engaged in keeping Bohr's garden which surrounds his new home at Carlsberg, the former brewer

Jacobsen's house. The house is very smart and well suited for big parties.

Next week we intend to spend in Paris where a brother of mine is living.

With many kind regards to you and Mrs. Nishina, also from my wife

Yours sincerely

G. Hevesy

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5. 5. 1933

My dear Professor Hevesy,

It was a great pleasure for us to have your very kind letter of the 26th March and we were very happy to hear that all your family are keeping very well.

As regards the element Boron we have been able here to get some in an amorphous form. With respect to Beryllium, Dr. Kirsch in Vienna informed me that one can get a plate of Be from "Phönix" in Rudolstadt, so I ordered it a few days ago. I do not know the purity of the material. I want it as pure as possible. I thank you very much for your kindness in troubling you to instruct Kahlbaum to send Be to us; I suppose it is in a powder form. Please tell Kahlbaum people to send me 2gr of powder Be. I should like to know its purity. I should like also to know if they could supply it in a form of plate or sheet. I thank you very much for your kindness in advance.

Regarding scandium you sent it to me as soon as you came back to Freiburg from Japan. I thanked you for it at that time. We intended to use it for the X-ray absorption spectra, which we have not carried out yet but hope to do it soon.

I saw your paper in Nature on Sm radioactivity, which interests us very much. What do you think of the report of Langer and Raitt who found Be to be radioactive.

We have been trying for nearly a year to take Wilson tracks of cosmic rays which initiate the chamber to expand and thus showing their own tracks. Now to our surprise Blackett and Ochialini have done exactly the same thing and of course they have on account of their skill and experience gone ahead of us. We hope, however, to get some interesting results soon.

As regards the artificial disintegration we are very slow owing to the lack of laboratory means. Nevertheless we cannot help to be tempted to do this sort of experiments, because there are so many problems which are waiting their solution. It is quite possible that we come too late, but that does not matter, it is the way to their solution which interests us.

I read in newspapers much about the new Fascism of Germany. This must have, as you say, advantages and disadvantages. I suppose there are many physicists who suffer from the new anti-semitic movement.

In Japan it is the time of reaction too and I suppose Japan is not very popular among most of foreign countries on account of the Manchurian affairs. We cannot help it, because that seems to be a national movement. For myself I am happy to be able to do science without being troubled with political affairs. Only thing I feel very troubled is the depreciation of our currency. It is nearly impossible to get any experimental apparatus from abroad, we have to get them made in Japan. That takes sometimes very much time.

You told me that Professor and Mrs. Bohr are going to visit Chicago, I do not know whether they would extend their journey to Japan. A long time ago I wrote to them asking whether they could come over here, but have not heard from them. We have been looking forward to see them here.

Cherry blossoms are now over here and trees are beautifully green. It is one of the best seasons here.

With kindest remembrances and best wishes to you and Mrs. Hevesy from my wife and myself

Yours sincerely  
Y.N.

Institut für Physik. Chemie  
der Univ.

Freiburg i. Br. 1933 4 June  
Hebelstr. 38

My dear Dr. Nishina!

It was a real pleasure to get your kind letter and to learn about your doings. You must have difficult times in Japan common with many other countries. We are also experiencing most interesting times however I won't enter the field of politics but remain within the lofty domain of science. After receiving your letter I instructed Kahlbaum to send you 2g of beryllium and to communicate to you the analysis of the sample should be available. I had the opportunity to speak few days ago of the leading metallurgist of Siemens and he told me that Kahlbaum purifies presumably the material purchased from Siemens. Be is prepared by electrolyzing a fused mixture of beryllium fluoride and barium fluoride and thus contains some Ba. It is in some respect tragic that you were anticipated in your work by Blackett. Laboratories like the Cavendish with their great experiences and means are of course best suited to take up new lines like the neutron research and so on. Early in April I saw Blackett in Paris and also Joliot and Broglie all working on the same line and doing brilliant work. I hope that the Be will safely reach you and you will have much success in your work. What happened with Nagaoka's trial to find anomalous isotopic mixture in  $U_3O_8$ ? Very remarkable was done on the field of isotopes lately. Especially the separation of the H isotopes and Kuhn's photochemical separation of Chlorine are brilliant achievements. We finished our work on the radioactivity of samarium. During our investigations on this subject we tested also beryllium and found a slight activity, however it is very difficult to prove that the activity is due to the element and not to an impurity present. Not long ago American investigators claim to have found that beryllium is radioactive. It may be it is right but not yet unambiguously proved. We are making slow progress with X-ray work and some progress on the field of diffusion in solids. Last week I gave an address on this subject at the annual meeting of the Bunsen Gesellschaft, this time in Karlsruhe.

Early in April all my three children got hooping cough. That is a very trying disease. Later I got it also and I am still not recovered, am unable to do any reasonable work. It was with the greatest pleasure we heard that Mrs. N. and your children are keeping well. Is life more expensive now in Japan as it used to be and have men with fixed salaries difficulties in that matter? In Germany the exchange did not drop but salaries were much reduced. My salary is for example less than a half it used to be, though it may be adjusted slightly. The general tendency

is to cut down "high" salaries. Very few Japanese are to be seen in these days in Germany, which is presumably at least partly due to exchange difficulties. Prof. and Mrs. Bohr arrived in the last days of April in New York, they proceeded to Chicago. I don't know if they intend to visit California. We hope to see them in Copenhagen, where we will be in August. My family is already leaving the middle of July and I as the term is finished. I am looking forward very much to come again to Denmark. The last summer spent there was in 1926.

With all my best wishes and kindest regards, also from my wife

Yours very sincerely  
G. Hevesy

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18. 7. '33

Dear Professor Hevesy

I thank you very much indeed for your very kind and interesting letter of the 4th June, which I received some weeks ago. I have also to thank you for your kindness in instructing Kahlbaum to send me 2 gr. of Be, which we have received all right some days after I received your letter. We are not yet using the material, but hope to use it for getting neutrons. I am much obliged to you for your taking troubles.

I saw your paper on the radioactivity of Sm and also the address at Bunsen Gesellschaft. They are all very interesting.

We are working on the cosmic ray particles and hope soon to get good photographs, but the trouble here at present is that the temperature is too high and gelatine and grease melt by itself and is not easy to handle. With artificial disintegration, the progress is rather slow but we hope soon to get some results. At present I am rather interested in the theoretical work on the creation of positive and negative electrons. I am making some calculations on it together with my assistant. We think now that we can understand the phenomena of positive electrons all right.

<sup>2</sup> As you wrote to me the recent works on the separation of isotopes (H<sup>2</sup> by Lewis and Cl by Kuhn) are wonderful. I hope the work will be pushed on in this direction then we will know more about atomic nuclei.

Professor Nagaoka has not, so far as I know, tried to find the anomalous atomic weight of O in  $U_{38}O_8$ . He is now the president of Osaka University (new) and seems to be very busy now.

I suppose that this letter will perhaps come to you in Denmark. I think that you enjoy the Danish peace in contrast to German excitement. It is very good for your health at least.

You asked me about the Japanese cost of living. Up till present the cost has not gone up very much, probably just a little. This is of course not the case with things imported. They are prohibitively expensive owing to the exchange rate. We cannot buy instruments from abroad and it is very inconvenient. You wrote to me that you see very few Japanese in Germany. That is of course due to the depreciation of our currency. It is very difficult for us to go abroad. Our salaries are not cut down as in Germany, thus if we live on things made in our country, we can get on all right at present. We do not know, however, how long such a condition continues.

It is very hot and disagreeable now here in Tokyo but we are all getting on all right in my family, boys are growing up, the elder is just over three years old and the younger over one.

How is your family? I hope they are all right. I and my wife send our best wishes and kindest remembrances to Mrs. Hevesy and yourself.

Yours

Y.N.



Hotelpension Hornbaekhus  
 Ejer:Edvard Johnsen  
 Telefon, Hornbaek 41

4 Aug, 1933

My dear Dr. Nishina,

We mentioned you yesterday when meeting Prof. Bohr at Gilleleje. He told me that he is so sorry that he had no time to write you. He is planning a journey to Japan next year. He just returned from the U.S. and was much impressed by the happenings in that country. I arrived here few days ago while my family came already to this place the middle of July. It is very beautiful here and the children are very happy to be on the sea side. We will stay here till the end of this month and proceed then to Hungary to visit my relatives there. I was very pleased to learn that the Be reached you safely and I hope it will prove to be of great use for you. Should you need any material from Europe pray don't hesitate to write to me. I assure you that it is a very great pleasure to me to do you or your friends the slightest service. I am also looking forward very much to hear particularly what your view on the nature of positive electron. Nuclear physics are getting more and more fascinating. I am admiring your great mobility rushing to Hokkaido to teach modern physics. In old days St. Paul was teaching the gospel with such a zeal as you are teaching wave mechanics. The means of communication became fortunately for you more convenient since those historic days.

Since I wrote you last I have not done any work except some experiments on the "cathode ray effect" trying to supplement your Copenhagen results. We followed up how the intensity ratio of  $Pb\ L\gamma_1$  and  $Sr\ K\alpha_1$  change after short and long exposures to electron bombardment. Using radioactive  $PbO$  we simultaneously measured the  $\alpha$  and  $\gamma$  activity of the anticathode to get a full information about the actual happening. Times in Germany are most interesting. You can study human history on experimental lines. But in long run if you happen not to be an historian you are getting tired and begin to long after a quieter atmosphere.

I was much interested to read that life did not become more expensive in Japan and hope that matters don't get worse with you. Incomes - all sorts - very materially decreased in our countries and the economic outlook is very dark. My family is keeping very well, the children are growing. I hope that your wife and the babies are very

fit and happy. Pray remember me most kindly to Mrs. Nishina, to Prof. Iimori and Kimura and all our friends in Tokyo.

My wife shares in my good wishes and hearty greetings to you

Yours G. Hevesy

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The Institute of Physical and  
Chemical Research  
Komagome, Hongo, Tokyo

Tokyo, Feb. 17, 1937

Dear Professor Hevesy,

I am writing this letter in order to ask you to do a favour for me. I should like to know the price in Copenhagen of heavy water of Norsk Hydro-Elektrisk Kvaelstofaktieselskab.

Until last June we bought it directly from this firm at the rate of Norw. Kr. 5.00 less 50% i.e. Kr. 2.50 per gram of guaranteed min. 99%  $D_2O$  under the condition that it is used only for our own scientific purposes. Since then, however, the sales in Japan has been taken over by an agent, who does not give any reduction in price. We should like to have about 500 or 1,000 grams of  $D_2O$  for neutron experiments and this makes a great difference. I should like therefore to know the price in Copenhagen. In case it is lower than here, I should be very much obliged to you if you would buy it for us and send it to me. I shall send you the necessary sum of money by cheque as soon as you let me know the price. Of course I would not like to give you too much trouble and please do not hesitate to tell me if this is very troublesome for you.

It is a long time since I wrote to you last. I received some letters and post-cards as well as various separate copies of your interesting works, which you kindly sent to me now and then. With many thanks I read them all. I must apologize you that I have not answered to you. Recent years I have become very busy and cannot write letters as I used to do.

How are your family and yourself ? I hope they are all very well. Bohrs are to arrive here on the 15th. April and we are all looking forward to seeing them here in Japan at last after such a long waiting.

With kindest regards and best remembrances to your family and yourself,

Yours ever

Y.N.

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Universitetets institut  
for teoretisk fysik

Blegdamsvej 15, København Ø  
den 8 March 1937

Dear Dr. Nishina,

I just obtained your kind letter dated Febr. 17 and I was very pleased to hear that you are keeping well and that you will soon have the visit of Prof. Bohr. My wife and myself have in our most vivid memory the delightful days spent at Tokyo and other resorts of your country and the unique kindness shown to us. I ordered at once 1,000 grams of  $D_2O$  from Norway (99%). When it arrives I will forward it to you insured. Pray kindly send a cheque payable to Bohr's Institute covering the equivalent of 2,500 Norwegian Crown. (In Sterling, Dollar or any Scandinavian currency). The 2500 Norwegian Kroner we will have to pay to the Norwegian Co. The amount paid for postage and insurance I will let you know at a latter date, this has no hurry, but in view of the stringent cash position of the institute we would be thankful to you for an early dispatch of the above mentioned sum.

It is to-day just three weeks ago that we got a little daughter, bringing up the number of my children to 4. We are very happy about this event, the baby and my wife are both keeping very well.

Life at the institute is pleasant as usual, we have unfortunately no one from Japan but I have collaborators from England, Holland, Czechoslovakia and Germany.

How is Mrs. Nishina, your little son must be quite a big boy, it is 6 years ago that we have been at your house. We all very much hope that sooner or later you will visit us in Copenhagen. Pray remember me most kindly to Mrs. Nishina and to all our friends at the Institute and the University.

With kindest regards, also from my wife

Yours ever

G. Hevesy

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Universitetets Institut  
for Teoretisk fysik

Blegdamsvej 15 København Ø  
den 14 V. 1937

My dear Dr. Nishina,

The heavy water was dispatched to you some time ago with a British Steamer, which is due in Yokohama June 21. I hope that the water will reach you safely. Enclosed I am sending you the invoice. As you will see the institute spent Danish Crown 112 and 7 Øre on transport, insurance and so on not covered by the proceeds of your draft. Pray send occasionally the above amount to the institute.

Dr. Frisch and Dr. Koch made recently absorption measurements of neutron in heavy water using 60 liter of 10% water lent us by the Norwegian Hydro. I am nearly exclusively doing biological work and am kept very busy by this activity. In the rooms where once hafnium was crystallized now are ignited livers of cats, incisors of rats and blood of dogs. Tempora mutantur!

My family is keeping very well and we much hope that you are all happy and prosperous.

You gave a very good time to Prof. and Mrs. Bohr. The Danish newspapers bring detailed news about their stay in Japan and how kindly

they were treated. We saw also your photograph together with that of Prof. Bohr in the Berlingske Tidende.

With heartiest greetings to you, Mrs. Nishina and all our common friends, also from my wife.

Yours ever  
G. Hevesy

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The Institute of Physical and  
Chemical Research  
Komagome, Hongo, Tokyo

Tokyo, August 28, 1937

Dear Professor Hevesy,

I must apologize you that I have not answered properly to your letters of March 8 and of May 14, and that I have not thanked you for your kindness in taking much trouble for procuring heavy water for us. As I have been very busy, I have not been able to write to you, although I have had a very bad conscience and have been carrying about your letters with me every day in the hope that I can write to you as soon as I get time.

First of all I must thank you very much indeed for the heavy water, which arrived here on about June 20. Everything went through all right and we are now using it for our cyclotron in producing neutrons. Every time we use heavy water we send our thankful thought to Copenhagen.

Next we must congratulate you and Mrs. Hevesy that you got a little daughter some months ago. We ought to have sent our congratulations a long time ago. Owing to the accumulation of various duties I am very sorry that we have not done so. How is she now and how are all your family ? I hope you are all in good health.

It was a great pleasure for us indeed to have had Professor Bohr and his family here in Japan. Personally it was such an encouragement and enlightenment for my scientific life that I shall never forget. We travelled together various famous places in Japan, the most of which you have also visited. It was good that they came here in peaceful time. It would have been impossible for them to travel through China at present, since as you know we are having bitter fightings over there. It is most unfortunate that one cannot find the way of avoiding such a calamity.

I know from your important papers as well as from what Prof. Bohr told us that you are doing pioneer work in biology. We intend to follow you in the same field. Our medical colleagues have been studying some biological effects produced by neutrons. I am sending to Prof. Bohr a copy of their note to "nature", which is expected soon to appear.

Our cyclotron is giving about 3 to 4 microamperes at 2.9 MV. We are trying to increase the current but have not succeeded yet. As Professor Bohr has probably told you already, we are going to install an electromagnet of about 220 tons, by means of which we ought to be able to produce a beam of 25 MV, if it works successfully. Professor Lawrence of California University has very kindly ordered the magnet for us and we hope to complete it some time next year. I know that it is not an easy matter to construct and operate such a cyclotron smoothly.

My wife and children are keeping all right. The elder boy whom you saw is seven years old now and began his school last April. The younger one is five years old and is going to his kindergarten.

Once again I send you our best thanks for the heavy water.

With kindest remembrances and best regards to yourself, Mrs. Hevesy and all your children from my wife and myself

Yours ever

Y. Nishina

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Universitetets institut  
for teoretisk fysik

Blegdamsvej 15, Kobenhavn O  
den 30 Aug. 1937

My dear Nishina,

Enclosed I am sending you a copy of the correspondence which took place recently between the Institute and the Norsk Hydro, re: your heavy water. As you will notice the last letter of the Hydro is written in a very kind spirit. Prof. Bohr is very pleased about the way this affair was settled. We are sending you the correspondence solely to inform you about the attitude taken by Prof. Bohr, should the latter be of any interest to you. Prof. Bohr hopes and so do I that you had no inconvenience with the representant of the firm in Tokyo.

The next week a conference takes place at the institute, what a pity that you can't be present.

My family is keeping very well and we learned with great pleasure from Prof. and Mrs. Bohr that the same is the case with you.

I just arrived back from a short visit in Hungary and I am kept pretty busy.

With hearty greetings, also from my wife to you, Mrs. Nishina and all our mutual friends

Yours ever  
G. Hevesy

Universitetets institut  
for teoretisk fysik

Blegdamsvej 15. Kobenhavn O  
den 7 Sept 1937

My dear Nishina,

Recently I sent copies of the correspondence between this Institute and the Norsk Hydro. I am sending you enclosed two more letters.

We hope that you and your family are keeping very well and that you are in no way disturbed by the war going on in China.

My wife and my two youngest children are still in Tisvilde where they are enjoying the beautiful fall. My wife and myself intend to take part in the Galvani Celebrations at Bologna next month. Otherwise we will have a rather quiet life.

With hearty greetings from us all

Yours ever

G. Hevesy

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The Institute of Physical and  
Chemical Research  
Komagome, Hongo, Tokyo

Tokyo, Oct. 3, 1937

My dear Hevesy,

I thank you very much indeed for your kind letter of Aug. 30 and that of Sept. 7, together with the copies of correspondence which has passed between Professor Bohr and Norsk Hydro-Elektrisk Kvaestofaktieselskab. I am very sorry indeed that I have caused such an unpleasant trouble for Professor Bohr as well as yourself and also for the whole Institute. I cannot apologize too much for this fault of me. I am very thankful to Professor Bohr for settling the matter in such a graceful manner. We have had no enquiries from the side of the agent of the firm in Japan nor from "Norsk Hydro". Every day we are using the heavy water and it now appears to all of us much more precious



than before.

I suppose you have enjoyed the Galvani celebration at Bologna. I hope all your family is keeping very well. How is your work going on ? I saw your recent note in Nature, which is very interesting for us.

We do not feel as yet much pressure from the war in China. If it last very long, our scientific activities will have necessarily to be reduced.

Our cyclotron is giving 15 micro-amps, at 3MV and I hope to use it for some work. My family is keeping all right.

With best wishes and kindest remembrances from us all to yourself, Mrs. Hevesy and your children.

Yours ever

Y. Nishina

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24 Juli, 1940, Tisvildeleje

Lieber Nishina, Haben Sie meinen herzlichsten Dank für Ihr Kabel das mich soeben erreichte. Für Ihre Bemühungen bin ich zu aufrichtigem Dank verpflichtet. Es wäre mir eine sehr grosse Freude Sie, Kimura, Imori und alle unsere gemeinsame Freunde in Tokyo wiedersehen zu können. Die grosse Güte die Sie uns während unseren letzten Besuch bekundet haben ist mir lebhaft in Erinnerung. Ich weiss noch nicht ob es mir möglich sein wird zu reisen, jedenfalls werde ich nicht vor September in Japan sein können, auch werde ich diesmal allein, also nicht mit meine Frau kommen können. Sobald wie meine endgültige Pläne

auskrystallisiert wird, lasse ich die Ihnen sofort wissen. Niels B. lässt Sie vielmals grüssen, er hat sich mit Ihrem Briefe sehr gefreut und wird Ihnen demnächst schreiben. Er ist mit dem Schreiben von Abhandlungen über die Fissionsfragen beschäftigt. Ich bin dabei unsere letzten Versuche über den Kreislauf von Kalium und Natrium zu beschreiben. Das Cyklotron arbeitet jetzt, aber starke Präparate können leider noch nicht dargestellt werden. Wir sind besonders darum interessiert stärkere Kaliumpräparate zu bekommen. Natrium geht je leichter und hat auch weniger biologisches Interesse. Ihr neuer Cyclotron arbeitet sicherlich mit bester Ausbeute. Es freut mich sehr Ihre Einrichtungen und Arbeiten in Japan sehen zu können. Hoffentlich wird mir das gelingen. Meiner Familie geht es sehr gut und hoffentlich ist bei Ihnen auch alles wohl. Bitte grüssen Sie alle sehr herzlich von meiner Frau und von mir. Ich danke Ihnen nochmals für Ihre Bemühungen und grüsse Sie sehr herzlich

Ihr Hevesy

G. Hevesy  
13 Trondhjemsgade  
København, Danmark

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BREVKORT

6 July, 1948

15 Blegdamsvej  
Copenhagen  
G. HEVESY

My dear Nishina,

We often wondered in the past 9 years how you, Kimura and all our friends in Japan are going on and it was with great pleasure I heard from Dr. Brues, whom I met last month during a 3 weeks stay in the U.S., that you are keeping well. I arrived in the most pleasant company of Prof. and Mrs. Bohr to Copenhagen and I am staying at the present with my wife and youngest daughter at Skagen. My 2 elder daughters are in England while my son is doing military service in the North of Sweden. We are mostly in Stockholm but I am going on with my work at Bohr's institutes which is getting now enlarged. Time is going on and deep in the past lies the time of our pleasant stay in Tokio and still more the

years of your stay in Copenhagen, which after all did not change much, though it became poorer and less well kept. I very much hope and so does my wife that we shall all meet again. Remember us most kindly to all our common friends.

Very sincerely yours

George Hevesy

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August 26, 1949

Professor G.V. Hevesy  
Universitetets Institut for Teoretisk Fysik  
Blegdamsvej 15  
Copenhagen, Denmark

My dear Hevesy,

About a year ago I received your very nice card. You probably do not know how pleased I was to read your dear old handwriting.

I hasten to inform you that I am coming to Copenhagen to attend the general meeting of the International Council of Scientific Unions to be held on September 14-16. I leave Tokyo on September 8 and arrive at Copenhagen on September 13 via London by B.O.A.C. plane. I shall probably leave Copenhagen on September 22 for return journey but I may have to leave earlier, if I attend the UNESCO meeting to be held in Paris. My travel expense was intended to be paid by UNESCO but it failed and GHQ in Tokyo decided to bear the expense.

I shall be very pleased to see you again. Everything in Japan has entirely changed. It was good that you saw Japan before the world war II.

Please send my kindest regard to Mrs. Hevesy,

with best wishes,

Yours

Yoshio Nishina

1949 15th Sept.

Institutet för  
Organ.-kemisk Forskning  
Stockholm 6  
63 Oden g.

My dear Nishina,

What a great pleasure to hear from you and to learn that you shall move about again in the familiar streets and institutes of Copenhagen. I spent August at the Blegdamsvej and shall be there again in October, this month I cannot leave Stockholm where I have important duties. I very much hope however that you shall visit this fine city and have a look at Siegbahn's very remarkable institute. After obtaining your letter I got at once in touch with Prof. Siegbahn and suggested to invite you to address an audience in his institute. He was very pleased with this suggestion and I very much hope that in meantime you make an appointment with him. Let me know when you are coming, I shall be at the airport or station to wait for you.

During the years of anxiety we often mentioned you with my wife hoping that you and all our friends in Japan are keeping well and it was a great relief when Dr. Brues from Chicago who saw you in Tokyo told me that you are going strong. We both hope and trust that we can ascertain ourselves about this fact in one of the coming days.

Heartiest greetings from both of us

ever yours

George Hevesy

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