

June 15, 1964

Dr. J. P. Dismukes  
Radio Corporation of America  
RCA Laboratories  
David Sarnoff Research Center  
Princeton, New Jersey

Dear Dr. Dismukes:

In a letter that Dr. Hockings addressed to Dr. Daniel Decker of our Department of Physics, Dr. Hockings stated that I should write to you concerning obtaining some germanium-silicon solid solutions for our high pressure studies. If possible, I would like to procure quantities of about one gram each in the form of powder 2 to 15 microns in size. These powders would be used in an x-ray diffraction study at pressures to 30,000 atmospheres. I do not know the range of composition that you have available. For the initial study, however, compositions of 10, 20, 30... wt.-% would be fine.

In addition to the powders for x-ray diffraction studies, it would be worthwhile to have some bars approximately  $1/32 \times 1/64 \times 1/4$  inch in dimensions for resistance measurements and post-mortem experiments to be performed after subjecting the bars to high pressures. We would require about four each of the bars at each composition level.

If you could supply these materials to us, we would be grateful indeed. We would, of course, be very happy to make the results of our experiments available to you as soon as they were concluded.

Thank you very much.

Very truly yours,

H. Tracy Hall  
Director of Research  
Room 224 ELB

HTH:lw

RADIO CORPORATION OF AMERICA

RCA LABORATORIES

*David Sarnoff Research Center*  
PRINCETON, N. J.



May 26, 1964

Prof. D. E. Decker  
Physics Department  
Brigham Young University  
Provo, Utah

Dear Daniel:

The news that Tracy Hall is interested in making high pressure X-ray measurements on germanium-silicon solid solutions is most welcome. Thank you for making enquiries. As the next step, I suggest that the person who will be concerned with the measurements should write to Dr. J.P. Dismukes at these Laboratories and describe exactly the form (powder?) and quantity (lg.?) of the specimens that would be needed. Also the compositions which would be most suitable. It is probable that we would have the materials in our stock and thus let you have them fairly soon.

With many thanks,

Sincerely yours,

A handwritten signature in cursive script that reads 'Eric'.

E. F. Hockings

EFH/afg

cc: J.P. Dismukes

*mp. f(P)*

*Vd mixing (lattice parameter f(P))*

*nature of permanently locked-in hP phases*

*elect res. as f(P)*