

CRYSTAL SYSTEMS CORPORATION

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August 8th, 2012

Dr. Chengxiang Xiang
Chemistry Department
California Institute of Technology

Dear. Dr. Chengxiang Xiang,

PREPARATION BEFORE THE INSTALLATION

I. Cargo Unpacking:

We are understanding that the cargo will arrive at your laboratory around the end of September.

The cargo are packed with ①outer packing of wooden crates and ②inner carton boxes. When the cargo arrived, please check the outer appearance, and if there is any damages, please let us know (If the outer damages are minor and you suppose that the contents seems to be not damaged, you do not need to inform us.).

Before our engineer arrives at your laboratory for the installation, if you can open ①outer packing of wooden crates and deliver the goods in the laboratory, we would appreciate it and it surely expedites the installation schedule.

Our engineer will open ②inner carton boxes at the beginning of the installation.

Please take care to dispose the packing materials.

For our better understanding, please inform followings;

(a) Which floor does your laboratory room locate?

(b) If you could deliver all the goods inside of your laboratory room,

We really appreciate your preparation in advance. However if you are facing some problems how to deliver the goods inside of your laboratory, please advise the detailed situation, for example, the door or elevator size is too small etc.

II. Electricity

·For FZ Furnace main body(FZ-T-4000-H-VII-VPO-PC)

----- 3 phase 200-230V from Distribution Panel

·For Vertical Molysili Furnace with Rotational Lifter(VEF-1800-ACS)

----- 1 phase 200-230V from Distribution Panel

·For Recirculating Chiller(HRS012)

----- 1 phase 100-120V from a receptacle on the wall

·For Turbo Vacuum Pump(HICUBE-80)

----- 1 phase 100-120V from a receptacle on the wall

·For Vacuum Pump for Rod Making Package(RM-001)

----- 1 phase 100-120V from a receptacle on the wall

III. Gas:

Please prepare One Cylinder (Ar or O₂) and a pressure regulator
The cylinder pressure is required to be 1.2 MPa which enables
0.95 Mpa in the sample chamber. So pressure regulator should stand 1.2 Mpa.
Please prepare 10 meters of gas tube (1/4" outer diameter) which connects the
cylinder and FZ Furnace Gas box.

IV. Installation Schedule

Our engineer is planning to visit your laboratory two full days for the
installation and the demonstration.

Most likely, it would be the beginning of October.

We would like to discuss further with you about this schedule.

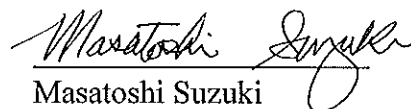
V. Demonstration of Single crystal growth:

At the end of the installation, our engineer will demonstrate the single
crystal growth of Rutile in front of you. If you would like to try
Cu₂O or CuO, please prepare such sample at your side.

VI. Others: Please prepare followings for the installation,

- (a) 25 liters of tap water.
- (b) a box of tissue paper
- (c) a bottle of Ethyl Alcohol.

Sincerely yours,



Masatoshi Suzuki
Senior Managing Director