

From: "Mukul Yadav" <mukul.yadav@meity.gov.in>
To: "bbkale.cmet" <bbkale@cmet.gov.in>, "Dr Sandip Chatterjee MeitY" <sandip@meity.gov.in>
Cc: "Mr Amitesh Kumar Sinha" <amitesh.iras@gov.in>, "Prashant Kumar" <prashant@meity.gov.in>
Sent: Wednesday, July 20, 2022 6:08:26 PM
Subject: Fwd: [Most Urgent] Lok Sabha Question Dy. No. 5375 for 27.07.2022-reg.

Most Urgent

Reminder

Dear Sir,

Please provide inputs by tomorrow 12: 00 PM.

With best regards,

Mukul Yadav
Scientist 'D'
Ministry of Electronics & Information Technology
Government of India
6, C.G.O. Complex, Electronics Niketan
New Delhi - 110003
Tel:- +91 11 24301777
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From: "Mukul Yadav" <mukul.yadav@meity.gov.in>
To: "bbkale.cmet" <bbkale@cmet.gov.in>, "Dr Sandip Chatterjee MeitY" <sandip@meity.gov.in>
Cc: "Mr Amitesh Kumar Sinha" <amitesh.iras@gov.in>, "Prashant Kumar" <prashant@meity.gov.in>
Sent: Tuesday, July 19, 2022 11:08:21 AM
Subject: [Most Urgent] Lok Sabha Question Dy. No. 5375 for 27.07.2022-reg.

Dear Sir,

Ministry of Electronics and Information Technology (MeitY), Government of India is in receipt of provisionally **admitted** Lok Sabha Question Dy. **No. 5375** for answer on **27.07.2022** regarding "**Shortage of Rare Earths Minerals**". The text of the question is as under:

- (a) whether the Government is aware of the shortage of rare earths minerals required for manufacture of semi conductor chips;
- (b) whether the recourses are dominated by one country in the world; and
- (c) if so, the steps/ measures being taken to increase the quantum of minerals required for manufacture of semi conductor devices and chips in India?

It is requested that inputs w.r.t the aforesaid Lok Sabha question may kindly be provided at the earliest.

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With best regards,

Mukul Yadav
Scientist 'D'
Ministry of Electronics & Information Technology
Government of India
6, C.G.O. Complex, Electronics Niketan
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From: "bbkale.cmet" <bbkale@cmet.gov.in>
To: "Dr Sandip Chatterjee MeitY" <sandip@meity.gov.in>
Cc: "Dr. Ratheesh" <ratheesh@cmet.gov.in>, "Radha Jaisimha" <radha@cmet.gov.in>
Sent: Wednesday, July 20, 2022 10:01:37 PM
Subject: Fwd: [Most Urgent] Lok Sabha Question Dy. No. 5375 for 27.07.2022-reg.

Dear Sandipji

Answer as per discussions with Rathhesh is already sent

With regards
BBK

From: "bbkale.cmet" <bbkale@cmet.gov.in>
To: "Mukul Yadav" <mukul.yadav@meity.gov.in>
Cc: "Dr Sandip Chatterjee MeitY" <sandip@meity.gov.in>, "Dr Ratheesh" <ratheesh@cmet.gov.in>
Sent: Wednesday, July 20, 2022 9:59:42 PM
Subject: Re: [Most Urgent] Lok Sabha Question Dy. No. 5375 for 27.07.2022-reg.

Dear Yadavji

Please see our opinion as per our expertise

a) whether the Government is aware of the shortage of rare earths minerals required for manufacture of semi conductor chips;

Rare Earth oxides are not required for manufacture of semiconductor chips

(b) whether the recourses are dominated by one country in the world; and

Yes, Most of the rare earth resources are with China

(c) if so, the steps/ measures being taken to increase the quantum of minerals required for manufacture of semi conductor devices and chips in India?

Semiconductor manufacture ecosystem requires electronic grade silicon wafers, high purity chemicals, gases and photoresists. Government has already taken measures to source the essential back end substrates are chemicals required for semiconductor ecosystem in the country.

If you need any further information let us know.

With regards

Dr. Bharat. B. Kale, Scientist-G, *FRSC (UK), FMASc, APAM Academician, Life Fellow of Indian Chemical Society.*
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Head, Nanocrystalline Materials,
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