Certificate

The work presented in this project entitled, "**Low temperature synthesis of thermally stable $BaWO_4:Yb^{3+}:Ho^{3+}$ nanophosphors: Tuning visible emission by controlling activator ion concentration**" is the resultof original investigation carried out by **Mr. Arnab Kumar Dey** at Industrial Chemistry & Applied Chemistry Department, Ramakrishna Mission Vidyamandira, under my supervision during the period of July, 2018 to September, 2018.

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Assistant Professor& HOD

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Certificate

The work presented in this project entitled, "**Low temperature synthesis of thermally stable $BaWO_4:Yb^{3+}:Ho^{3+}$ nanophosphors: Tuning visible emission by controlling activator ion concentration**" is the resultof original investigation carried out by **Mr. Bibek Samanta** at Industrial Chemistry & Applied Chemistry Department, Ramakrishna Mission Vidyamandira, under my supervision during the period of July, 2018 to September, 2018.

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Certificate

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Certificate

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Certificate

The work presented in this project entitled, "**Strong reddish yellow emissions through upconversion of Yb^{3+}: Er^{3+}doped wire shaped Strontium Aluminate nanophosphor**" is the resultof original investigation carried out by **Mr. Sk Anish** at Industrial Chemistry & Applied Chemistry Department, Ramakrishna Mission Vidyamandira, under my supervision during the period of July, 2018 to September, 2018.

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Certificate

The work presented in this project entitled, "**Strong reddish yellow emissions through upconversion of Yb^{3+}: Er^{3+}doped wire shaped Strontium Aluminate nanophosphor**" is the resultof original investigation carried out by **Mr. Jayanta Ghosh** at Industrial Chemistry & Applied Chemistry Department, Ramakrishna Mission Vidyamandira, under my supervision during the period of July, 2018 to September, 2018.

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Certificate

The work presented in this project entitled, "**White light generation by novel $Yb^{3+}/Ho^{3+}/Tm^{3+}$co-doped $SrWO_4$ nanophosphor**" is the resultof original investigation carried out by **Mr. Akash Ghosh** at Industrial Chemistry & Applied Chemistry Department, Ramakrishna Mission Vidyamandira, under my supervision during the period of July, 2018 to September, 2018.

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Certificate

The work presented in this project entitled, "**White light generation by novel $Yb^{3+}/Ho^{3+}/Tm^{3+}$co-doped $SrWO_4$ nanophosphor**" is the resultof original investigation carried out by **Mr. Sandipan Bhattacharyya** at Industrial Chemistry & Applied Chemistry Department, Ramakrishna Mission Vidyamandira, under my supervision during the period of July, 2018 to September, 2018.

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Certificate

The work presented in this project entitled, "**Multicolour tuning and perfect white emission from novel $PbWO_4:Yb^{3+}$: Ho^{3+}: Tm^{3+} nanophosphor**" is the resultof original investigation carried out by **Mr. Jotypriya Sarkar** at Industrial Chemistry & Applied Chemistry Department, Ramakrishna Mission Vidyamandira, under my supervision during the period of July, 2018 to September, 2018.

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Certificate

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The work presented in this project entitled, "**Multicolour tuning and perfect white emission from novel $PbWO_4:Yb^{3+}$: Ho^{3+}: Tm^{3+} nanophosphor**" is the resultof original investigation carried out by **Mr. Santu Panja** at Industrial Chemistry & Applied Chemistry Department, Ramakrishna Mission Vidyamandira, under my supervision during the period of July, 2018 to September, 2018.

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Certificate

The work presented in this project entitled, "**Multicolour tuning and perfect white emission from novel $PbWO_4:Yb^{3+}: Ho^{3+}: Tm^{3+}$ nanophosphor**" is the resultof original investigation carried out by **Mr. Indranil Dey** at Industrial Chemistry & Applied Chemistry Department, Ramakrishna Mission Vidyamandira, under my supervision during the period of July, 2018 to September, 2018.

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The work presented in this project entitled, "**Multicolour tuning and perfect white emission from novel $PbWO_4:Yb^{3+}$: Ho^{3+}: Tm^{3+} nanophosphor**" is the resultof original investigation carried out by **Mr. Arnab Sarkar** at Industrial Chemistry & Applied Chemistry Department, Ramakrishna Mission Vidyamandira, under my supervision during the period of July, 2018 to September, 2018.

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