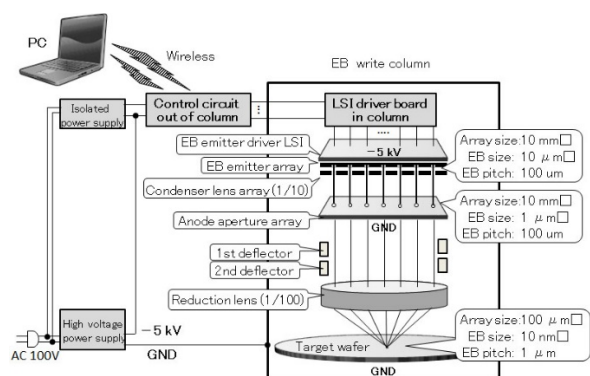
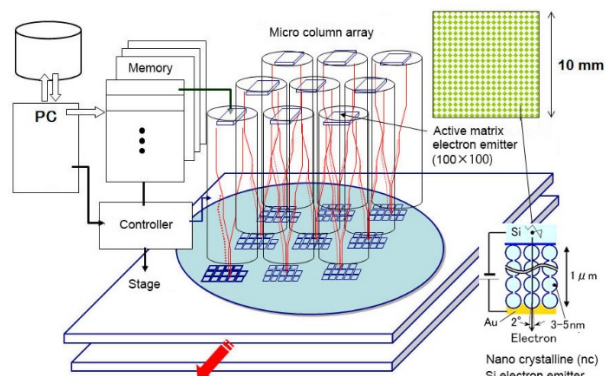
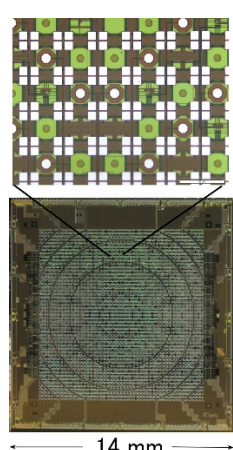
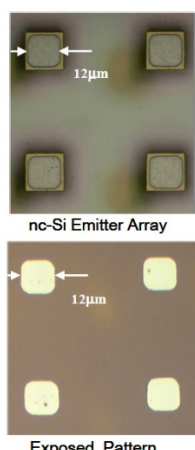
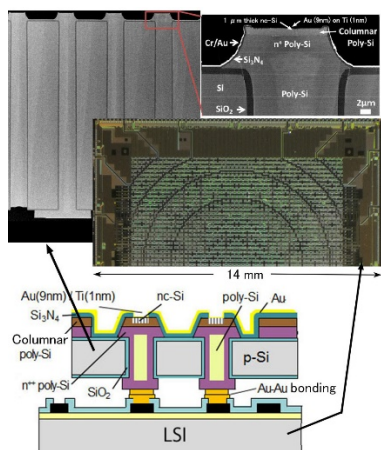


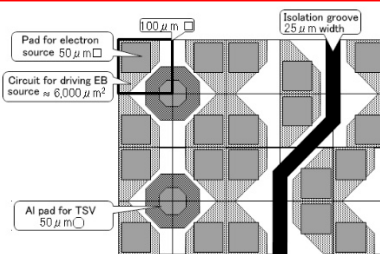
## 13 Development of massive parallel EB exposure system



EB exposure system using active matrix electron source array      Structure of a single column (prototype is lateral)

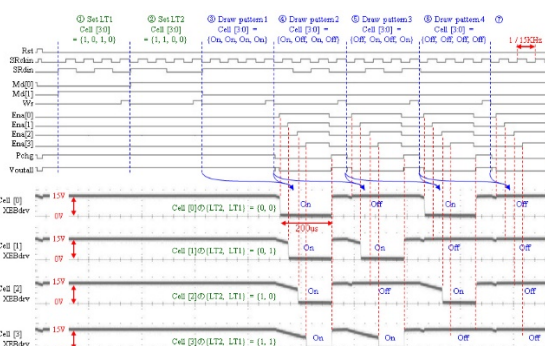
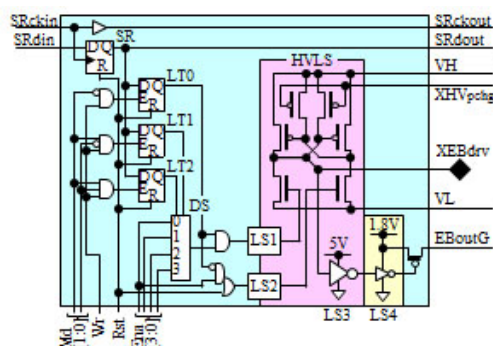


Active matrix electron source chip, the EB exposure system and published book “Development of massive parallel Electron Beam Write System” are displayed in the next room (Historical museum of technology).

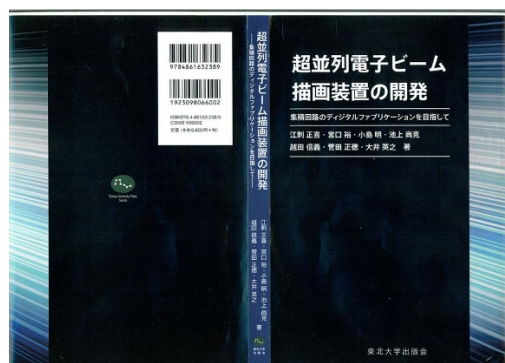
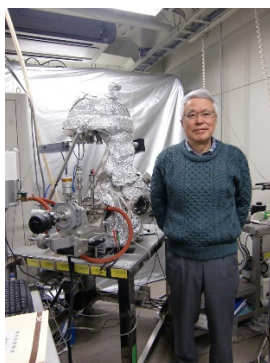


Nanocrystalline (nc) Si electron source connected to LSI with TSV

Driving LSI (100 × 100 cells)



M.Esashi, A.Kojima, N.Ikegami, H.Miyaguchi and N.Koshida : Development of Massively Parallel Electron Beam Direct Write Lithography Using Active-matrix Nanocrystalline-silicon Electron Emitter Arrays, Microsystems & Nanoengineering (2015) 1, 15029(1-8)



(H.Miyaguchi, M.Esashi, A.Kojima, N.Ikegami, H.Ohi, M.Sugata) (N.Koshida)

(Tohoku University Press 2018)

(The EB exposure system is displayed in the Historical museum of technology)