

Fig. 1

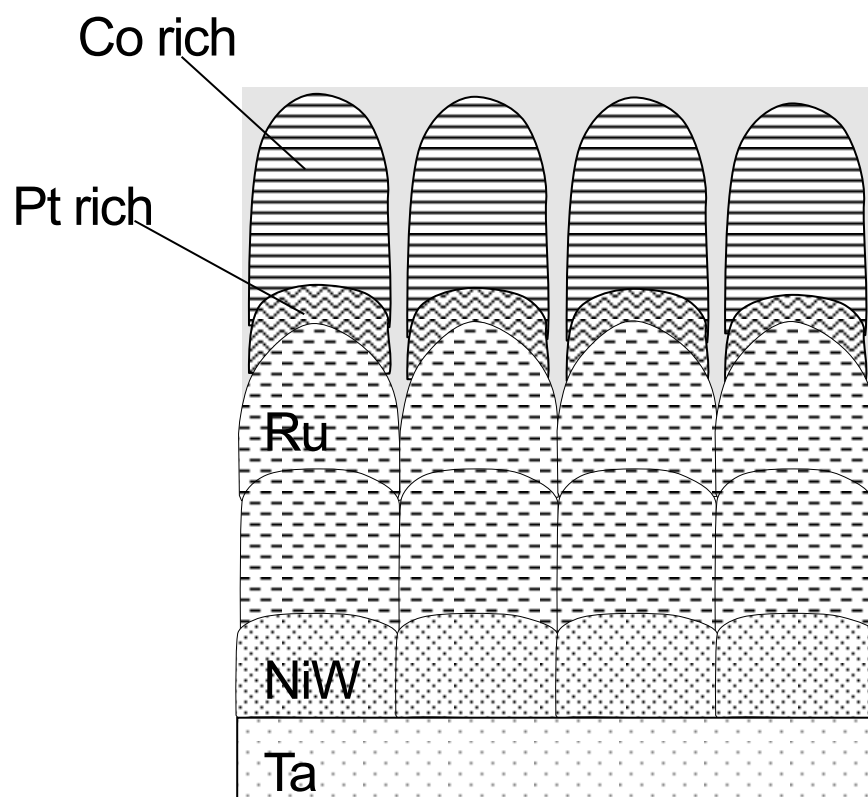


Fig. 2

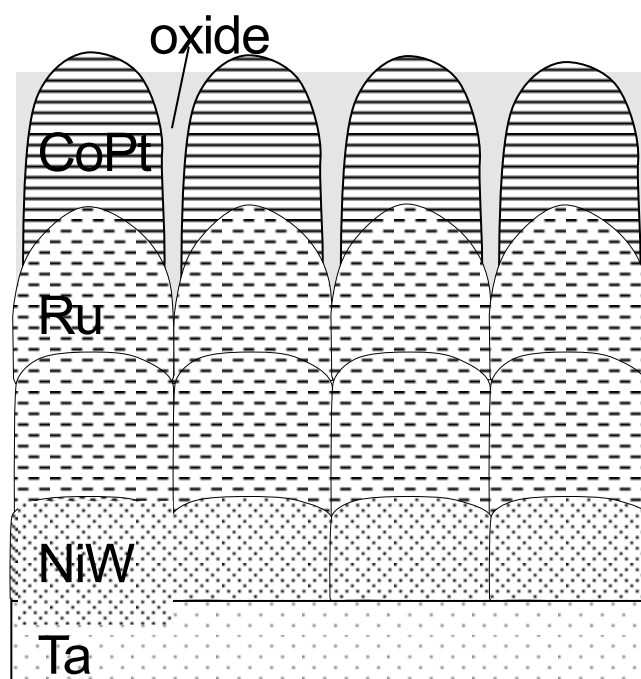


Fig. 3-A

| layer structure        | thickness   |
|------------------------|-------------|
| C                      | 7 nm        |
| Co-rich Magnetic layer | 0.5 - 16 nm |
| Pt-rich Buffer layer   | 0 - 2.5 nm  |
| Ru Under layer 2       | 10 nm       |
| Ru Under layer 1       | 10 nm       |
| Ni90W10                | 6 nm        |
| Ta                     | 5 nm        |
| Glass                  |             |

Fig. 3-B

| layer structure        | thickness   |
|------------------------|-------------|
| C                      | 7 nm        |
| Pt-rich Buffer layer   | 0 - 2.6 nm  |
| Co-rich Magnetic layer | 0.5 - 16 nm |
| Ru Under layer 2       | 10 nm       |
| Ru Under layer 1       | 10 nm       |
| Ni90W10                | 6 nm        |
| Ta                     | 5 nm        |
| Glass                  |             |

Fig. 3-C

| layer structure          | thickness  |
|--------------------------|------------|
| C                        | 7 nm       |
| Pt-rich Buffer layer 4   | 0 - 0.8 nm |
| Co-rich Magnetic layer 4 | 4 nm       |
| Pt-rich Buffer layer 3   | 0 - 0.8 nm |
| Co-rich Magnetic layer 3 | 4 nm       |
| Pt-rich Buffer layer 2   | 0 - 0.8 nm |
| Co-rich Magnetic layer 2 | 4 nm       |
| Pt-rich Buffer layer 1   | 0 - 0.8 nm |
| Co-rich Magnetic layer 1 | 4 nm       |
| Ru Under layer 2         | 10 nm      |
| Ru Under layer 1         | 10 nm      |
| Ni90W10                  | 6 nm       |
| Ta                       | 5 nm       |
| Glass                    |            |

Fig. 4

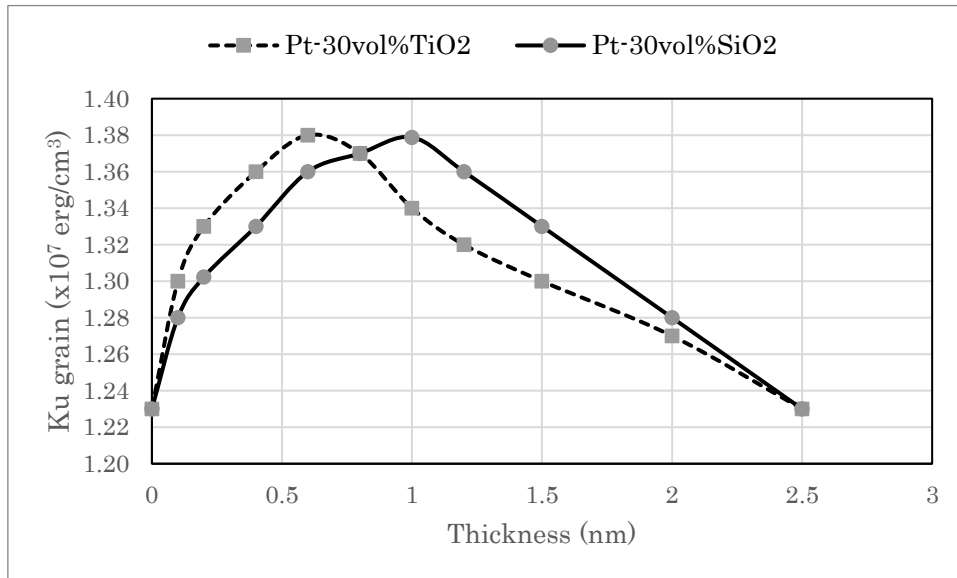


Fig. 5

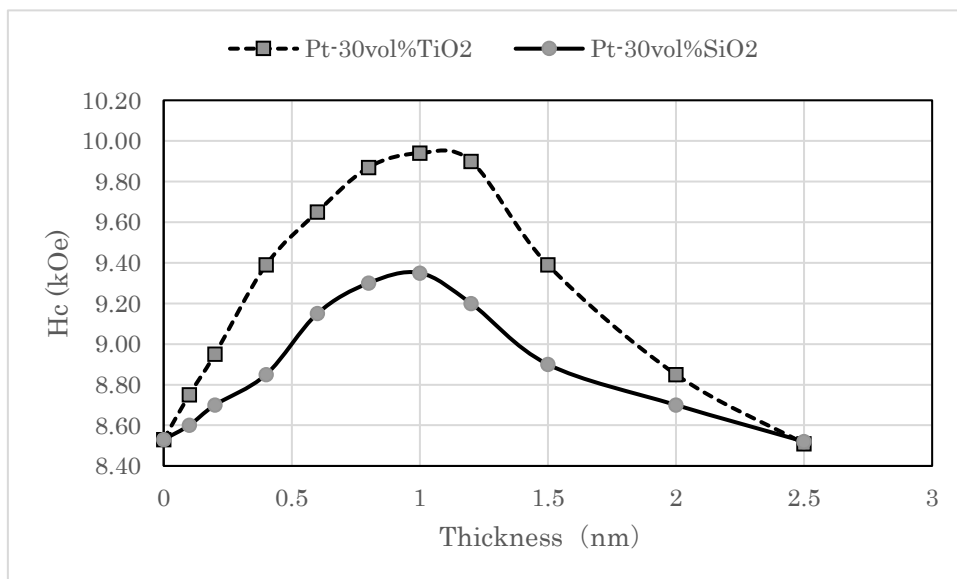


Fig. 6

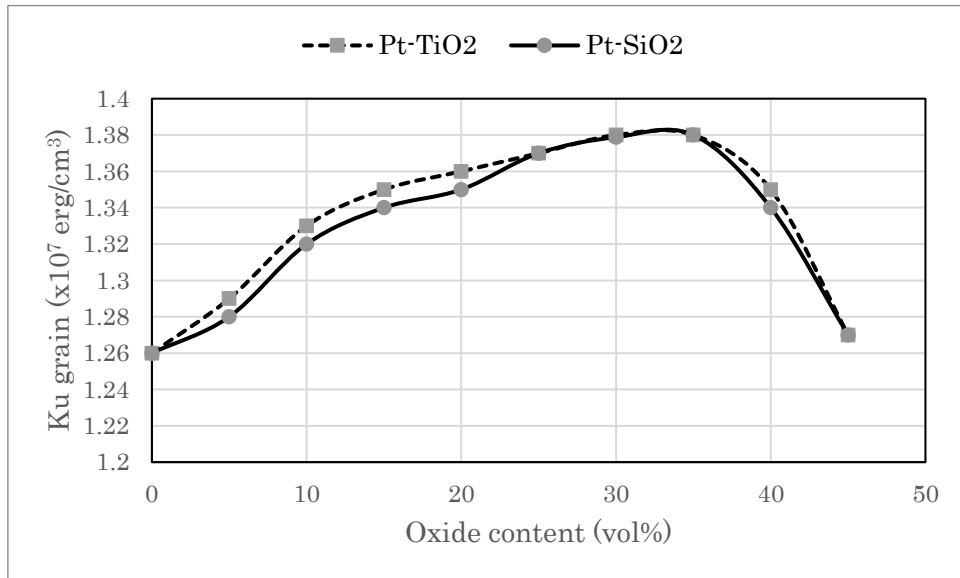


Fig. 7

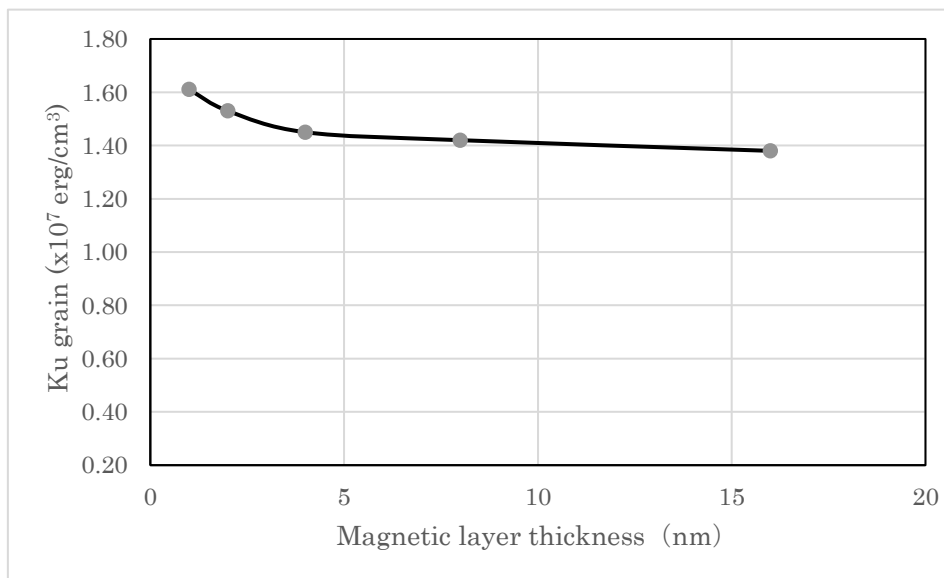


Fig. 8

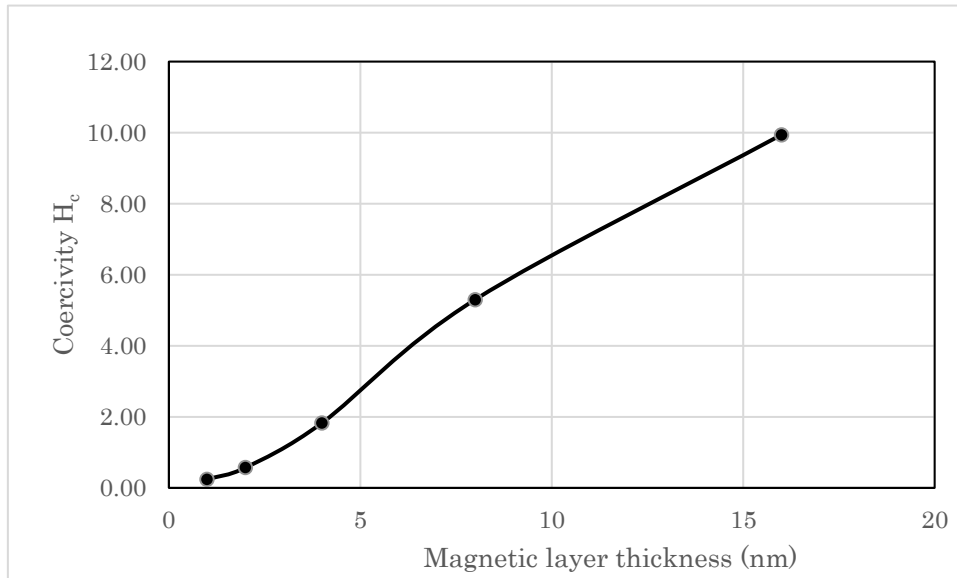


Fig. 9

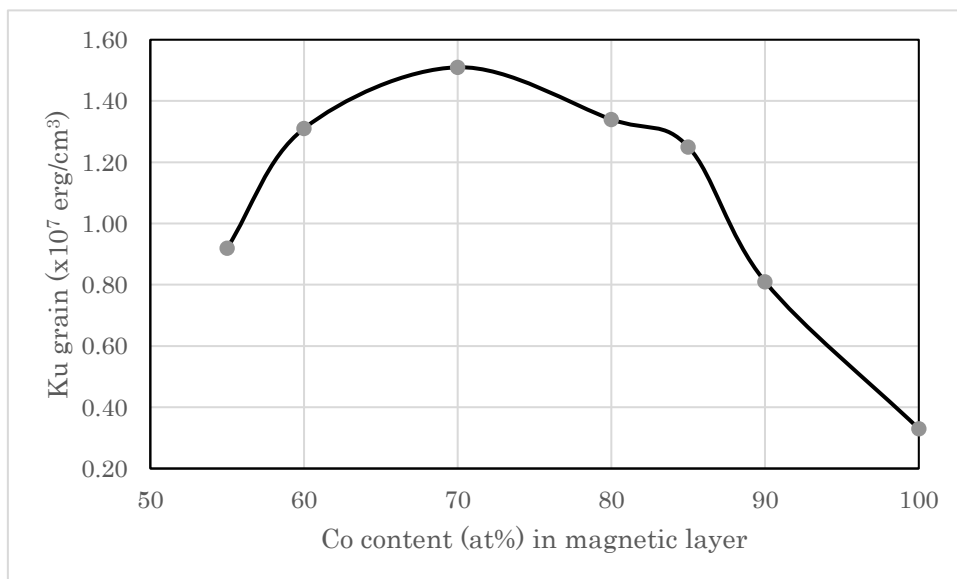


Fig. 10

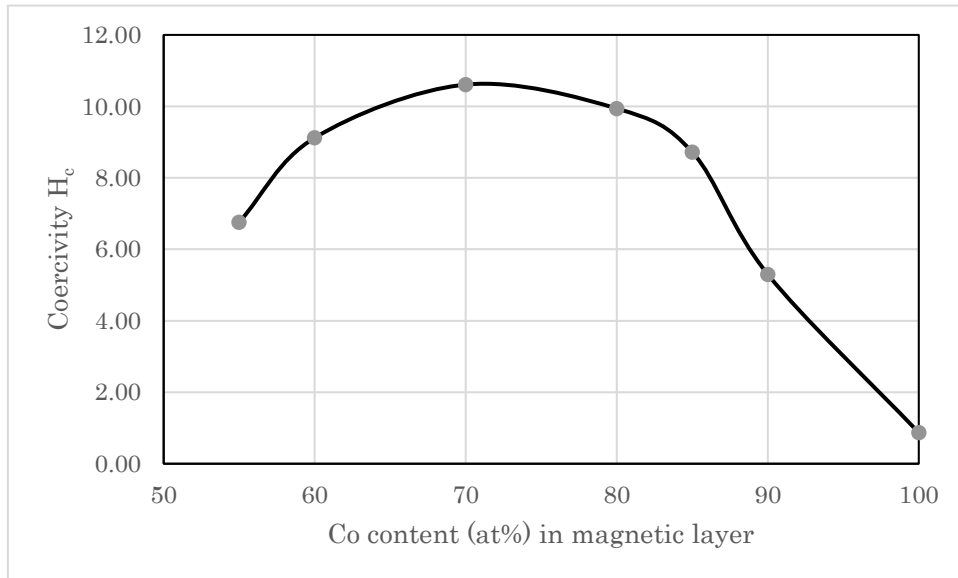


Fig. 11

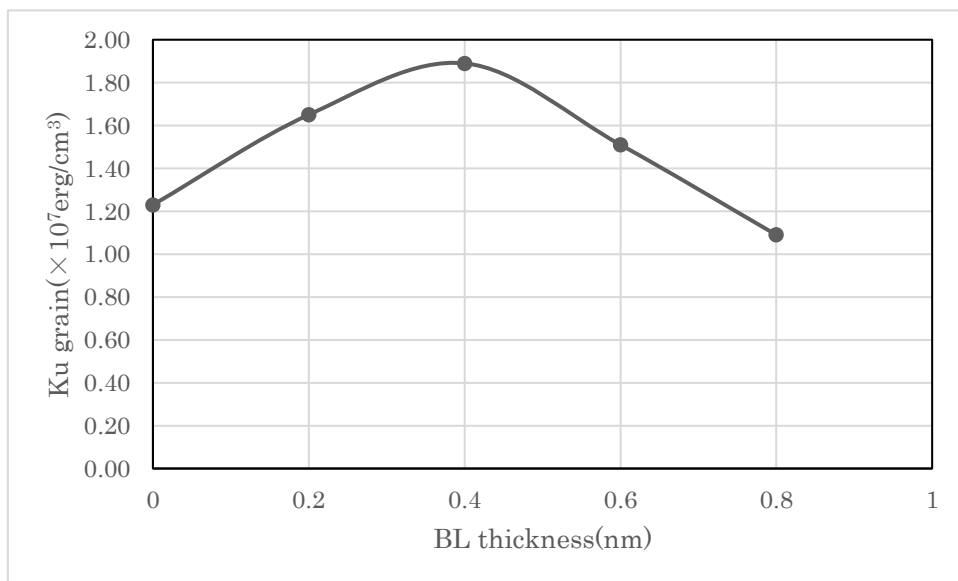


Fig. 12

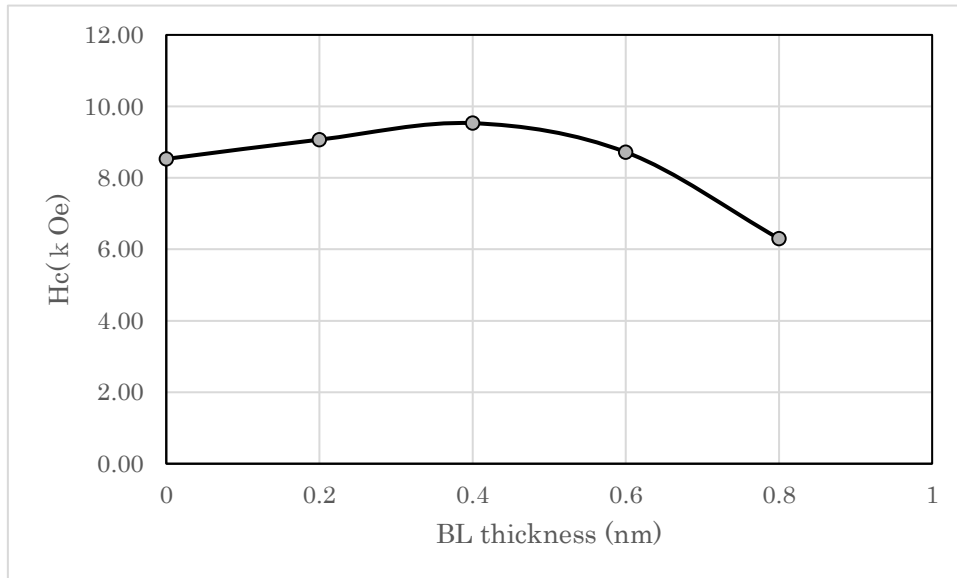


Fig. 13

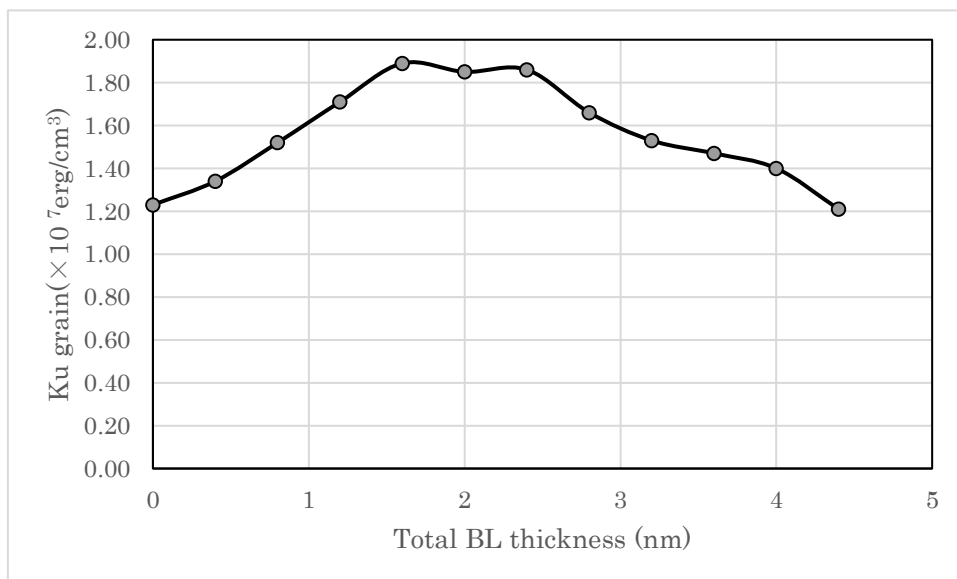


Fig. 14

