

## Errata

Please make corrections in example 1 given in notes on lecture # 8. The same has been corrected with the publisher.

**Example 1:** Calculate the relaxation time for polystyrene having conductivity of  $1200\mu\text{S}/\text{cm}$  and relative permittivity of 3.

**Solution:**

Given that  $\sigma = 1200\mu\text{S}/\text{cm}$  or  $0.12\text{S}/\text{m}$  and  $\epsilon_r = 3$ .

Using:

$$T_0 = \frac{\epsilon_0 \epsilon_r}{\sigma} = \frac{3 \times 8.85 \times 10^{-12}}{0.12} = \mathbf{0.22 \text{ nano-sec}}$$

This relaxation time is very small, so it would seem that polystyrene has a property of being a non-accumulator with conductivity greater than  $50\text{pS}/\text{m}$ .