

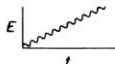
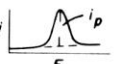

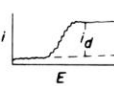
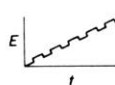
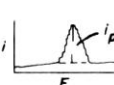
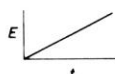
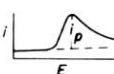
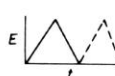

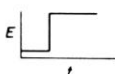



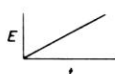
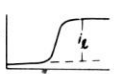

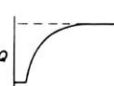

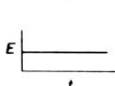
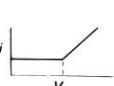
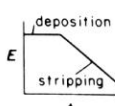


Controlled Potential Methods

Name of Technique	Potential Excitation Signal	Mass Transfer	Measurement	Analytical Relation to Bulk Concentration	Typical Display	
Polarography (dc or normal)	Slow linear scan (or constant E)		Diffusion	i vs. E	$i_d \propto C$	
AC polarography	Slow linear scan + low amplitude sine wave		Diffusion	i_{ac} vs. E	$i_p \propto C$	
Pulse polarography	Square voltage pulses of increasing amplitude		Diffusion	i vs. E	$i_d \propto C$	
Differential pulse polarography	Square voltage pulses of constant amplitude + linear ramp		Diffusion	Δi vs. E	$i_p \propto C$	
Single sweep voltammetry	Linear scan E		Diffusion	i vs. E	$i_p \propto C$	
Cyclic voltammetry	Triangular scan E		Diffusion	i vs. E	$i_p \propto C$	
Chronoamperometry	Step E		Diffusion	i vs. t	$i_t \propto C$	
Chronocoulometry	Step E		Diffusion	Q vs. t	$Q \propto C$	
Hydrodynamic voltammetry	Linear scan E (or constant E)		Convection/diffusion	i vs. E	$i_L \propto C$	
Controlled potential coulometry	Constant E		Convection/diffusion	Q vs. t	$Q = \int_0^t i dt = nFVC$	
Controlled potential electrogravimetry	Constant E		Convection/diffusion	Weight of deposit	Weight $\propto VC$	None
Amperometric titration (one or two polarized electrodes)	Constant E + titrant addition		Convection/diffusion	i vs. volume	Volume of titrant $\propto VC$	
Stripping voltammetry	Constant E followed by linear scan or differential pulse scan		Convection/diffusion	i vs. E	$i_p \propto C$	