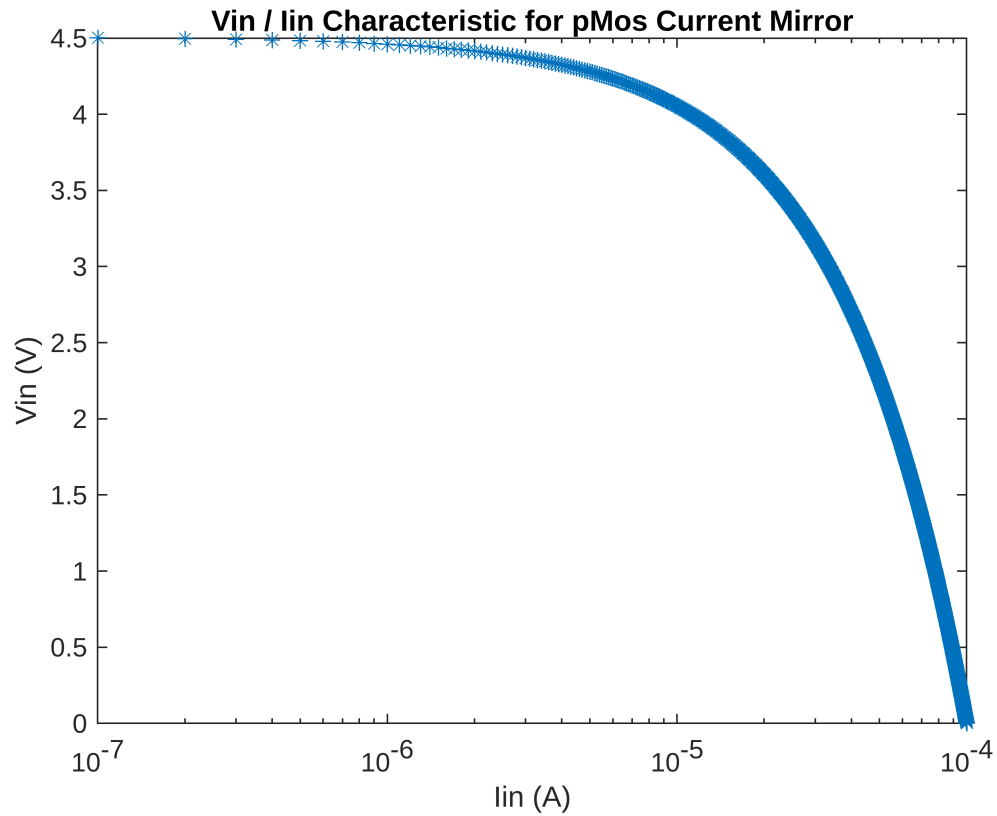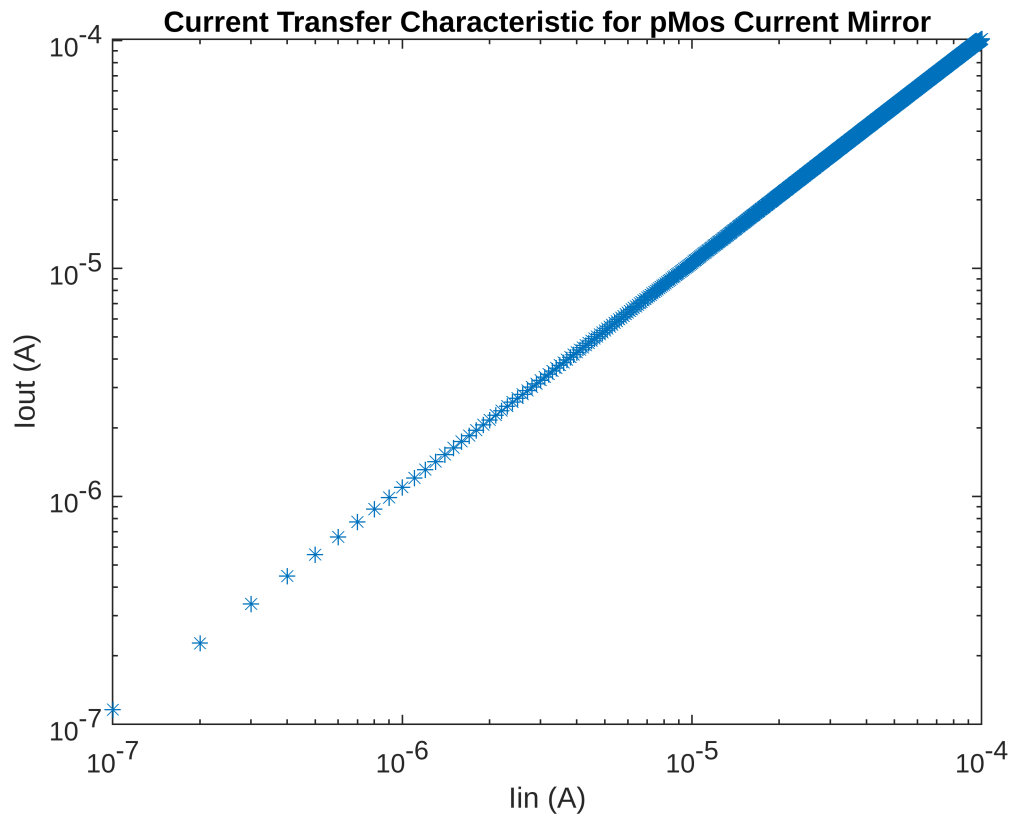```
loadspice("Draft1.txt");
Vout = linspace(0,4.5,1001);
semilogx(Iin,flip(Vout),'*');
xlabel("Iin (A)")
ylabel("Vin (V)")
title("Vin / Iin Characteristic for pMos Current Mirror")
```



Vin / Iin Characteristic for pMos Current Mirror

```
loglog(Iin,Iout, "*")
xlabel("Iin (A)")
ylabel("Iout (A)")
title("Current Transfer Characteristic for pMos Current Mirror")
```

1

Current Transfer Characteristic for pMos Current Mirror


```
loadspice("exp3_weak.txt");
loadspice("exp3_mod.txt");
loadspice("exp3_strong.txt");


Vout_exp3 = linspace(0,5,101);
semilogy(Vout_exp3,Iout_weak,'.');
hold on;
semilogy(Vout_exp3,Iout_mod,'.');
hold on;
semilogy(Vout_exp3,Iout_strong,'.')
xlabel("Iout (A)")
ylabel("Vout (V)")
legend("Weak Inversion","Moderate Inversion", "Strong Inversion", 'Location',"southwest
ylim([10e-10 10e-4])
title("Current Transfer Characteristic for pMos Current Mirror")
```

Current Transfer Characteristic for pMos Current Mirror

Vout (V) vs Iout (A)

Legend:
- Weak Inversion
- Moderate Inversion
- Strong Inversion
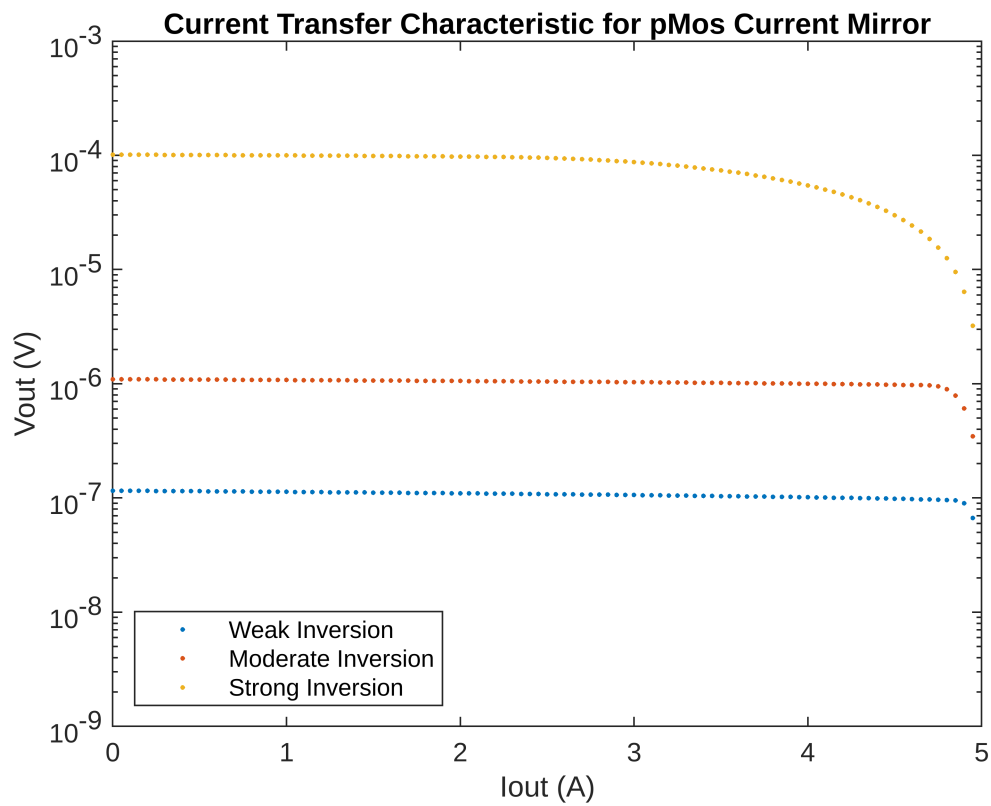
We can see that the overall behaviour is the same but the simulated experiment is using ideal components.

Vout

Vdd
5V

Vout
0V
Min

.include engr2420.sub
.dc Vout 0V 5V 0.05

Iin

Iin
0.1mA

Mout

Iin

Iout_strong

Vout