Lawrence, Thompson, and Chen Respond: The key new experimental result reported in our paper is the existence of a temperature scale of order 40 K in $CePd_3$. In the paper we identified this scale as the coherence temperature, but Mihalisin and Crow (MC) rightly point out that the onset of coherence can already be observed at $T_{max} = 125$ K. To clarify our main point, then, we should perhaps speak of *three* energy scales in $CePd_3$: the high temperature T_K, the temperature T_{max}, which signals the onset of coherence, and the temprature $T_? = 40$ K below which further anomalies occur, including the growth of the $5d$ contribution to the $4f$ form factor.

Evidence for this scale comes primarily from (a) the radically different pressure dependence of the resistivity above and below 40 K and (b) the existence of two maxima (one at $T=0$ and another at T_{max}) separated by a minimum in the resistivity of $Ce_{0.97}La_{0.03}Pd_3$ alloys. If alloying destroyed coherence on the scale T_{max}, we would expect only one maximum; the existence of the minimum implies that two different mechanisms affect the resistivity at low temperatures.

To date we have studied the resistivity of CeM_xPd_3 alloys for $M = La$, $x = 0.03$, 0.06, and 0.09 and for $M = Y,Sc$, $x = 0.03$. Our data agree with that of Schneider and Wohlleben[1] and differ from that of MC[2] in two significant respects. First, MC do not observe the two maxima for $x = 0.01$ and 0.03. Second, the MC data are identical for $x = 0.01$ to 0.04, while our data and those of Schneider and Wohlleben show $\rho_0(x)$ to vary strongly in this range of x, saturating for $x \geqslant 0.06$. Therefore, we disagree that an "additive-impurity" model is irrelevant for $x = 0.03$.

On the other hand, the resisitivity *is* virtually identical for different solutes ($M = La$, Y, Sc) at fixed x: $\rho_0(x)$ has the same value[1] and our recent work shows that for $x = 0.03$ the temperature dependence $\{\rho = \rho_0[1-(T/T_*)^2]$ with $T_* \sim 40\text{–}50$ K$\}$ is identical for the three solutes. It is the *absence* of a cerium atom from its appropriate site that governs the alloy resistivity. Such a situation can be described by the Hamiltonian given in our paper: a pure Anderson lattice plus a "Kondo-hole" term. In retrospect, we realize that the terminology is unfortunate since it is easy to show for a Kondo (as opposed to Anderson) lattice that the hole term has the wrong sign to give a Kondo effect. Nevertheless, if the heavy quasiparticles carry the electric current, they will be strongly scattered by such a "cerium sublattice hole," and the effect will disappear when the heavy fermions renormalize away at high temperatures. Both the observed T^2 coefficients and the existence of a minimum near 40 K in the alloys suggest this effect occurs on the scale $T_?$.

Most studies[3] of $CePd_{3+y}$ show a large residual resistivity ρ_0 when $y > 0$ and a vanishing ρ_0 for $y < 0$. Our explanation of this is that when $y > 0$ there will be vacancies or Pd atoms on the cerium sublattice, causing strong scattering. ($AuCu_3$ disorder due to excessive annealing can cause the same effect.[1]) When y is small in $Ce_{1-x}M_xPd_{3+y}$ these effects can dominate the reistivity; perhaps this is why MC observed only one maximum and no variation of ρ_0 with x. We compensated by making y slightly negative.

Such large effects per solute atom are *not* necessarily expected in other systems. As pointed out in our paper, $CePd_3$ is unusual in having a very low density of carriers at ϵ_F. The resistivity will be affected more profoundly by the $4f$'s than in, say, $CeSn_3$ where there exists a healthy density of Sn s-p electrons to shunt the f channel.

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[3] M. J. Besnus, J. P. Kappler, and A. Meyer, J. Phys. F **13**, 597 (1983); H. Sthioul, D. Jaccard, and J. Sierro, in *Valence Instabilities,* edited by P. Wachter and H. Boppart (North-Holland, Amsterdam, 1982), p. 443. Our data for $y = -0.12$, -0.02, -0.01, $+0.04$, and $+0.09$ agree with those of these two reports. Curiously, the MC data shown in Ref. 2 have the opposite sign, i.e., large residual resistivity for *negative x.*